(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-56668.1	A-115543.3	Same	187	A-115549.3	Same	408		
AD-56669.1	A-115554.1		187	A-115555.1		408		
AD-56670.1	A-115568.1		187	A-115569.1		408		
AD-56673.1	A-115544.3		187	A-115549.4		408		
AD-56674.1	A-115556.1		187	A-115557.1		408		
AD-56678.1	A-115545.3		187	A-115549.5		408		
AD-56679.1	A-115558.1		187	A-115559.1		408		
AD-56680.1	A-115572.1		187	A-115573.1		408		
AD-56683.1	A-115546.3		187	A-115549.6		408		
AD-56684.1	A-115560.1		187	A-115561.1		408		
AD-56685.1	A-115574.1		187	A-115575.1		408		
AD-56688.1	A-115547.3		187	A-115549.7		408		
AD-56689.1	A-115535.4		187	A-115562.1		408		
AD-56690.1	A-115542.4		187	A-115576.1		408		
AD-56693.1	A-115520.4		187	A-115563.1		408		
AD-56694.1	A-115577.1		187	A-115578.1		408		
AD-53821.1	A-110696.1	UAGACCUGUUUUGCUUUUGUA	188	A-109547.2	UACAAAAGCAAAACAGGUCUAGA	409	3602	3624
AD-56660.1	A-115594.1	AGACCUGUUUUGCUUUUGU	189	A-115595.1	ACAAAAGCAAAACAGGUCUAG	410	3603	3623
AD-56661.1	A-115580.2	Same	189	A-115610.1	Same	410		
AD-56665.1	A-115580.1		189	A-115581.1		410		
AD-56666.1	A-115596.1		189	A-115597.1		410		
AD-56667.1	A-115611.1	GACCUGUUUUGCUUUUGU	190	A-115612.1	ACAAAAGCAAAACAGGUCAUA	411	3603	3623

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-56671.1	A-115582.1	AGACCUGUUUUGCUUUUGU	191	A-115583.1	ACAAAAGCAAAACAGGUCUAG	412	3603	3623
AD-56672.1	A-115598.1		191	A-115599.1		412		
AD-56676.1	A-115584.1	Same	191	A-115585.1	Same	412		
AD-56677.1	A-115600.1		191	A-115601.1		412	Same	Same
AD-56681.1	A-115586.1	Same	191	A-115587.1	Same	412		
AD-56682.1	A-115602.1		191	A-115603.1		412		
AD-56686.1	A-115588.1		191	A-115589.1		412		
AD-56687.1	A-115604.1		191	A-115605.1		412		
AD-56691.1	A-115590.1		191	A-115591.1		412		
AD-56692.1	A-115606.1		191	A-115607.1		412		
AD-56695.1	A-115592.1		191	A-115593.1		412		
AD-56696.1	A-115608.1		191	A-115609.1		412		
AD-53826.1	A-110697.1	UUUUGUAACUUGAAGAUAUUU	192	A-109549.2	AAAUAUCUUCAAGUUACAAAAGC	413	3616	3638
AD-53832.1	A-110698.1	UUUGUAACUUGAAGAUAUUUA	193	A-109551.2	UAAAUAUCUUCAAGUUACAAAAG	414	3617	3639
AD-53792.1	A-110699.1	UUGUAACUUGAAGAUAUUUAU	194	A-109553.2	AUAAAUAUCUUCAAGUUACAAAA	415	3618	3640
AD-53798.1	A-110700.1	UGUAACUUGAAGAUAUUUAUU	195	A-109555.2	AAUAAAUAUCUUCAAGUUACAAA	416	3619	3641
AD-53819.1	A-110727.1	GUAACUUGAAGAUAUUUAUUU	196	A-109609.2	AAAUAAAUAUCUUCAAGUUACAA	417	3620	3642
AD-53815.1		CUAGACCUGUUUUGCUUUUGU	197		ACAAAAGCAAAACAGGUCUAGAA	418	3601	

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-57928.40		Same	197		Same	418		
AD-59182.5			197			418		
AD-59184.3			197			418		
AD-59186.3			197			418		
AD-59171.13			197			418		
AD-59176.7			197			418		
AD-59170.7			197			418		
AD-59175.7		Same	197		Same	418		
AD-59179.7			197			418		
AD-59218.1			197			418		
AD-59222.1			197			418		
AD-59226.1			197			418		
AD-59230.1			197			418		
AD-59235.1			197			418		
AD-59207.1			197			418		
AD-59211.1			197			418		
AD-59215.1			197			418		
AD-59219.1			197			418		
AD-59223.1			197			418		
AD-59181.5			197			418		
AD-59172.5			197			418		
AD-59177.5			197			418		
AD-59180.5			197			418		
AD-59183.5			197			418		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-59185.5			197			418		
AD-59173.5			197			418		
AD-59232.1		CUAGACCUGUUUUGCUUUUGU	198		ACAAAAGCAAAACAGGUCUAGAA	419	3600	
AD-59236.1		Same	198		Same	419	Same	
AD-59216.1			198			419		
AD-59220.1			198			419		
AD-59224.1			198			419		
AD-59228.1			198			419		
AD-59233.1			198			419		
AD-59237.1			198			419		
AD-59209.1			198			419		
AD-59208.1			198			419		
AD-59212.1		CUAGACCUGUUUUGCUUUUGU	199		ACAAAAGCAAAACAGGUCUAGAA	420	3600	
AD-59210.1		CUAGACCUGUUUUGCUUUUGU	200		ACAAAAGCAAAACAGGUCUAGAA	421	3601	
AD-59214.1		AGACCUGUUUUGCUUUUGU	201		ACAAAAGCAAAACAGGUCUAG	422	3603	
AD-59227.1		Same	201		Same	422		
AD-59231.1			201			422		
AD-59198.3			201			422		
AD-59200.3			201			422		
AD-59203.3		Same	201		Same	422		
AD-59204.3			201			422		
AD-59188.3			201			422		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-59191.3			201			422		
AD-59213.1			201			422		
AD-59217.1			201			422		
AD-59221.1			201			422		
AD-59225.1			201			422		
AD-59229.1			201			422		
AD-59234.1			201			422		
AD-59238.1			201			422		
AD-59241.1			201			422		
AD-59245.1			201			422		
AD-59250.1			201			422		
AD-59246.1		CUAGACCUGUUUUGCUUUUGU	202		ACAAAAGCAAAACAGGUCUAGA	423	3602	
AD-59253.2		UAGACCUGUUUUGCUUUUGU	203		ACAAAAGCAAAACAGGUCUAGA	424	3602	
AD-59242.1		AGACCUGUUUUGCUUUUGU	204		ACAAAAGCAAAACAGGUCUAGA	425	3602	
AD-59253.1		UAGACCUGUUUUGCUUUUGU	205		ACAAAAGCAAAACAGGUCUAGA	426	3602	
AD-59258.1		UAGACCUGUUUUGCUUUUGU	206		ACAAAAGCAAAACAGGUCUAGA	427	3602	
AD-59251.1		CUAGACCUGUUUUGCUUUUGU	207		ACAAAAGCAAAACAGGUCUAG	428	3603	
AD-59256.1		UAGACCUGUUUUGCUUUUGU	208		ACAAAAGCAAAACAGGUCUA	429	3604	
AD-59260.1		AGACCUGUUUUGCUUUUGU	209		ACAAAAGCAAAACAGGUCU	430	3605	

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936 .3
AD-59248.1		GACCUGUUUUGCUUUUGU	210		ACAAAAGCAAAACAGGUCU	431	3605	
AD-59247.1		GACCUGUUUUGCUUUUGU	211		ACAAAAGCAAAACAGGUCUA	432	3604	
AD-59252.1		AGACCUGUUUUGCUUUUGU	212		ACAAAAGCAAAACAGGUCUA	433	3604	
AD-59257.1		UAGACCUGUUUUGCUUUUGU	213		ACAAAAGCAAAACAGGUCUA	434	3604	
AD-59261.1		AGACCUGUUUUGCUUUUGU	214		ACAAAAGCAAAACAGGUCUAG	435	3603	
AD-59262.1		UAGACCUGUUUUGCUUUUGU	215		ACAAAAGCAAAACAGGUCUAG	436	3603	
AD-59265.1		CUAGACCUGUUUUGCUUUUGU	216		ACAAAAGCAAAACAGGUCUAG	437	3603	
AD-59196.13		UAGACCUGUUUUGCUUUUGU	217		ACAAAAGCAAAACAGGUCUAGAA	438	3601	
AD-59189.11		AGACCUGUUUUGCUUUUGU	218		ACAAAAGCAAAACAGGUCUAGAA	439	3601	
AD-59190.3		UCUAGACCUGUUUUGCUUUUGU	219		ACAAAAGCAAAACAGGUCUAGAA	440	3601	
AD-59192.3		UUCUAGACCUGUUUUGCUUUUGU	220		ACAAAAGCAAAACAGGUCUAGAA	441	3601	
AD-59240.1			220			441		
AD-59244.1			220			441		
AD-59202.7		Same	220		Same	441	Same	
AD-59195.5			220			441		
AD-59249.1			220			441		
AD-59254.1			220			441		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
AD-59259.1			220			441		
AD-59264.1			220			441		
AD-59264.2			220			441		
AD-59255.1			220			441		
AD-57928.1			220			441		
AD-58893.1			220			441		
AD-58894.1			220			441		
AD-58895.1			220			441		
AD-58896.1			220			441		
AD-58897.1			220			441		
AD-58898.1			220			441		
AD-58899.1			220			441		
AD-58900.1		CAAGCAGACAUUUAUCUUUUU	221		AAAAAGAUAAAUGUCUGCUUGCU	442	N/A	
AD-58902.1		UUUUCUAGACCUGUUUUGCUU	222		AAGCAAAACAGGUCUAGAAAAGU	443	3597	
		AGACCUGUUUUGCUUUUGU	223		ACAAAAGCAAAACAGGUCUAG	444		
		AGACCUGUUUUGCUUUUGU	224		ACAAAAGCAAAACAGGUCUAG	445		
		AGACCUGUUUUGCUUUUGU	225		ACAAAAGCAAAACAGGUCUAG	446		
		AGACCUGUUUUGCUUUUGU	226		ACAAAAGCAAAACAGGUCUAG	447		
		AGACCUGUUUUGCUUUUGU	227		ACAAAAGCAAAACAGGUCUAG	448		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
		AGACCUGUUUUGCUUUUGU	228		ACAAAAGCAAAACAGGUCUAG	449		
		CUAGACCUGUUUUGCUUUUGU	229		ACAAAAGCAAAACAGGUCUAGAA	450		
		Same	229		Same	450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
			229			450		
		AGACCUGUUUUGCUUUUGU	230		ACAAAAGCAAAACAGGUCUAG	451		
		AGACCUGUUUUGCUUUUGU	231		ACAAAAGCAAAACAGGUCUAG	452		
		CUAGACCUGUUUUGCUUUUGU	232		ACAAAAGCAAAACAGGUCUAGAA	453		
		Same	232		Same	453		
			232			453		
			232			453		
			232			453		
			232			453		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
		CUAGACCUGUUUUGCUUUUGU	233		ACAAAAGCAAAACAGGUCUAGAA	454		
		Same	233		Same	454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
		Same	233		Same	454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_17 4936.3	End In NM_1 74936 .3
			233			454		
			233			454		
			233			454		
			233			454		
		Same	233		Same	454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		

(continued)

Duplex Name	Sense Oligo Name	Sense Trans Seq	SEQ ID NO:	Antisense Oligo Name	Antisense Trans Seq	SEQ ID NO:	Start In NM_174936.3	End In NM_174936.3
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
		Same	233		Same	454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		
			233			454		

Table 2. PCSK9- modified sequences

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53649.1	A-110542.1	CfgAfgGfaCfgGfCfGfaCfuAfcGfaGfgAfL96	455	461	A-109239.2	uCfcUfcGfuAfgUfcgcCfgUfcCfuCfgsUfsc	1006
AD-53650.1	A-110550.1	GfcCfgGfgGfaUfAfCfcUfcAfcCfaAfgAfL96	456	673	A-109255.2	uCfuUfgGfuGfaGfguaUfcCfcCfgGfcsGfsg	1007
AD-53651.1	A-110558.1	GfcCfcCfaUfgUfCfGfaCfuAfcAfuCfgAfL96	457	773	A-109271.2	uCfgAfuGfuAfgUfcgaCfaUfgGfgGfcsAfsa	1008
AD-53652.1	A-110566.1	CfcUfgGfuGfgAfGfGfuGfuAfuCfuCfcUfL96	458	896	A-109287.2	aGfgAfgAfuAfcAfccuCfcAfcCfaGfgsCfsu	1009
AD-53653.1	A-110574.1	UfcCfuAfgAfcAfCfCfaGfcAfuAfcAfgAfL96	459	913	A-109303.2	uCfuGfuAfuGfcUfgguGfuCfuAfgGfasGfsa	1010
AD-53654.1	A-110582.1	GfcAfgGfgUfcAfUfGfgUfcAfcCfgAfcUfL96	460	955	A-109319.2	aGfuCfgGfuGfaCfcauGfaCfcCfuGfcsCfsc	1011
AD-53696.1	A-110589.1	CfcUfgCfgCfgUfGfCfuCfaCfaAfcUfgCfcAfL96	461	1109	A-109333.2	uGfgCfaGfuUfgAfgcaCfgCfgCfaGfgsCfsu	1012
AD-53697.1	A-110597.1	UfaGfgCfcUfgGfAfGfuUfuAfuUfcGfgAfL96	462	1159	A-109349.2	uCfcGfaAfuAfaAfcucCfaGfgCfcUfasUfsg	1013
AD-53698.1	A-110605.1	GfgCfaCfgAfuGfCfCfuGfcCfuCfuAfcUfL96	463	1318	A-109365.2	aGfuAfgAfgGfcAfggcAfuCfgUfcCfcsGfsg	1014
AD-53699.1	A-110613.1	GfcAfuUfgCfaGfCfCfaUfgAfuGfcUfgUfL96	464	1543	A-109381.2	aCfaGfcAfuCfaUfggcUfgCfaAfuGfcsCfsa	1015
AD-53700.1	A-110621.1	GfgCfcUfgGfuUfCfCfcUfgAfgGfaCfcAfL96	465	1640	A-109397.2	uGfgUfcCfuCfaGfggaAfcCfaGfgCfcsUfsc	1016
AD-53701.1	A-110629.1	CfgCfuUfuUfgGfGfGfgUfgAfgGfgUfgUfL96	466	1901	A-109413.2	aCfaCfcCfuCfaCfcccCfaAfaAfgCfgsUfsu	1017
AD-48400.1	A-98247.2	UfuUfuCfuAfgAfcCfuGfuUfuUfgCfuUfL96	467		A-93455.4	aAfgCfaAfaAfcAfgGfuCfuAfgAfaAfasGfsu	1018
AD-53656.1	A-110551.1	CfcGfgGfgAfuAfCfCfuCfaCfcAfaGfaUfL96	468	674	A-109257.2	aUfcUfuGfgUfgAfgguAfuCfcCfcGfgsCfsg	1019
AD-53657.1	A-110559.1	CfcAfuGfuCfgAfCfUfaCfaUfcGfaGfgAfL96	469	776	A-109273.2	uCfcUfcGfaUfgUfaguCfgAfcAfuGfgsGfsg	1020
AD-53658.1	A-110567.1	CfuGfgUfgGfaGfGfUfgUfaUfcUfcCfuAfL96	470	897	A-109289.2	uAfgGfaGfaUfaCfaccUfcCfaCfcAfgsGfsc	1021
AD-53659.1	A-110575.1	AfgAfcAfcCfaGfCfAfuAfcAfgAfgUfgAfL96	471	917	A-109305.2	uCfaCfuCfuGfuAfugcUfgGfuGfuCfusAfsg	1022
AD-53660.1	A-110583.1	CfaGfgGfuCfaUfGfGfuCfaCfcGfaCfuUfL96	472	956	A-109321.2	aAfgUfcGfgUfgAfccaUfgAfcCfcUfgsCfsc	1023
AD-53702.1	A-110590.1	CfuGfcGfcGfuGfCfUfcAfaCfuGfcCfaAfL96	473	1110	A-109335.2	uUfgGfcAfgUfuGfagcAfcGfcGfcAfgsGfsc	1024
AD-53703.1	A-110598.1	AfgGfcCfuGfgAfGfUfuUfaUfuCfgGfaAfL96	474	1160	A-109351.2	uUfcCfgtAfaUfaAfacuCfcAfgGfcCfusAfsu	1025
AD-53704.1	A-110606.1	CfaAfcUfuUfgGfCfCfgCfuGfuGfuGfgAfL96	475	1421	A-109367.2	uCfcAfcAfcAfgCfggcCfaAfaGfuUfgsGfsu	1026
AD-53705.1	A-110614.1	GfuUfgAfgGfcAfGfAfgAfcUfgAfuCfcAfL96	476	1592	A-109383.2	uGfgAfuCfaGfuCfucuGfcCfuCfaAfcsUfsc	1027

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53706.1	A-110622.1	GfgUfaCfuGfaCfCfCfcCfaAfcCfuGfgUfL96	477	1664	A-109399.2	aCfcAfgGfuUfgGfgggUfcAfgUfaCfcsCfsg	1028
AD-53707.1	A-110630.1	CfuUfuUfgGfgGfGfUfgAfgGfgUfgUfcUfL96	478	1903	A-109415.2	aGfaCfaCfcCfuCfaccCfcCfaAfaAfgsCfsg	1029
AD-53661.1	A-110544.1	AfcCfgCfuGfcGfCfCfaAfgGfaUfcCfgUfL96	479	556	A-109243.2	aCfgGfaUfcCfuUfggcGfcAfgCfgGfusGfsg	1030
AD-53663.1	A-110560.1	UfcGfaCfuAfcAfUfCfgAfgGfaGfgAfcUfL96	480	781	A-109275.2	aGfuCfcUfcCfuCfgauGfuAfgUfcGfasCfsa	1031
AD-53664.1	A-110568.1	GfgUfgGfaGfgUfGfUfaUfcUfcCfuAfgAfL96	481	899	A-109291.2	uCfuAfgGfaGfaUfacaCfcUfcCfaCfcsAfsg	1032
AD-53665.1	A-110576.1	CfaCfcAfgCfaUfAfCfaGfaGfuGfaCfcAfL96	482	920	A-109307.2	uGfgUfcAfcUfcUfguaUfgCfuGfgUfgsUfsc	1033
AD-53666.1	A-110584.1	GfgUfcAfuGfgUfCfAfcCfgAfcUfuCfgAfL96	483	959	A-109323.2	uCfgAfaGfuCfgGfugaCfcAfuGfaCfcsCfsu	1034
AD-53708.1	A-110591.1	CfgUfgCfuCfaAfCfUfgCfcAfaGfgGfaAfL96	484	1115	A-109337.2	uUfcCfcUfuGfgCfaguUfgAfgCfaCfgsCfsg	1035
AD-53709.1	A-110599.1	GfgCfcUfgGfaGfUfUfuAfuUfcGfgAfaAfL96	485	1161	A-109353.2	uUfuCfcGfaAfuAfaacUfcCfaGfgCfcsUfsa	1036
AD-53710.1	A-110607.1	UfuGfgCfcGfcUfGfUfgUfgGfaCfcUfcUfL96	486	1426	A-109369.2	aGfaGfgUfcCfaCfacaGfcGfgCfcAfasAfsg	1037
AD-53711.1	A-110615.1	UfgAfgGfcAfgAfGfAfcUfgAfuCfcAfcUfL96	487	1594	A-109385.2	aGfuGfgAfuCfaGfucuCfuGfcCfuCfasAfsc	1038
AD-53712.1	A-110623.1	GfuUfgGfcAfgCfUfGfuUfuUfgCfaGfgAfL96	488	1717	A-109401.2	uCfcUfgCfaAfaAfcagCfuGfcCfaAfcsCfsu	1039
AD-53713.1	A-110631.1	UfuUfuGfgGfgGfUfGfaGfgGfuGfuCfuAfL96	489	1904	A-109417.2	uAfgAfcAfcCfcUfcacCfcCfcAfaAfasGfsc	1040
AD-53667.1	A-110545.1	GfcUfgCfgCfcAfAfGfgAfuCfcGfuGfgAfL96	490	559	A-109245.2	uCfcAfcGfgAfuCfcuuGfgCfgCfaGfcsGfsg	1041
AD-53668.1	A-110553.1	AfuAfcCfuCfaCfCfAfaGfaUfcCfuGfcAfL96	491	680	A-109261.2	uGfcAfgGfaUfcUfuggUfgAfgGfuAfusCfsc	1042
AD-53669.1	A-110561.1	AfcUfaCfaUfcGfAfGfgAfgGfaCfuCfcUfL96	492	784	A-109277.2	aGfgAfgUfcCfuCfcucGfaUfgUfaGfusCfsg	1043
AD-53670.1	A-110569.1	UfgGfaGfgUfgUfAfUfcUfcCfuAfgAfcAfL96	493	901	A-109293.2	uGfuCfuAfgGfaGfauaCfaCfcUfcCfasCfsc	1044
AD-53671.1	A-110577.1	UfaCfaGfaGfuGfAfCfcAfcCfgGfgAfaAfL96	494	928	A-109309.2	uUfuCfcCfgGfuGfgucAfcUfcUfgUfasUfsg	1045
AD-53672.1	A-110585.1	UfcAfuGfgUfcAfCfCfgAfcUfuCfgAfgAfL96	495	961	A-109325.2	uCfuCfgAfaGfuCfgguGfaCfcAfuGfasCfsc	1046
AD-53714.1	A-110592.1	CfaCfcCfuCfaUfAfGfgCfcUfgGfaGfuUfL96	496	1151	A-109339.2	aAfcUfcCfaGfgCfcuaUfgAfgGfgUfgsCfsc	1047
AD-53715.1	A-110600.1	GfcCfuGfgAfgUfUfUfaUfuCfgGfaAfaAfL96	497	1162	A-109355.2	uUfuUfcCfgAfaUfaaaCfuCfcAfgGfcsCfsu	1048
AD-53716.1	A-110608.1	UfgGfcCfgCfuGfUfGfuGfgAfcCfuCfuUfL96	498	1427	A-109371.2	aAfgAfgGfuCfcAfcacAfgCfgGfcCfasAfsa	1049

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53717.1	A-110616.1	GfaGfgCfaGfaGfaGfAfCfuGfaUfcCfaCfuUfL96	499	1595	A-109387.2	aAfgUfgGfaUfcAfgucUfcUfgCfcUfcsAfsa	1050
AD-53718.1	A-110624.1	UfgGfcAfgCfuGfUfUfuUfgCfaGfgAfcUfL96	500	1719	A-109403.2	aGfuCfcUfgCfaAfaacAfgCfuGfcCfasAfsc	1051
AD-53719.1	A-110632.1	GfgGfgUfgAfgGfGfUfgUfcUfaCfgCfcAfL96	501	1909	A-109419.2	uGfgCfgUfaGfaCfaccCfuCfaCfcCfcsCfsa	1052
AD-53674.1	A-110554.1	CfaCfcAfaGfaUfCfCfuGfcAfuGfuCfuUfL96	502	686	A-109263.2	aAfgAfcAfuGfcAfggaUfcUfuGfgUfgsAfsg	1053
AD-53675.1	A-110562.1	UfaCfaUfcGfaGfGfAfgGfaCfuCfcUfcUfL96	503	786	A-109279.2	aGfaGfgAfgUfcCfuccUfcGfaUfgUfasGfsu	1054
AD-53676.1	A-110570.1	AfgGfuGfuAfuCfUfCfcUfaGfaCfaCfcAfL96	504	904	A-109295.2	uGfgUfgUfcUfaGfgagAfuAfcAfcCfusCfsc	1055
AD-53677.1	A-110578.1	AfcAfgAfgUfgAfCfCfCfa CfcGfgGfaAfaUfL96	505	929	A-109311.2	aUfuUfcCfcGfgUfgguCfaCfuCfuGfusAfsu	1056
AD-53678.1	A-110586.1	AfgGfaCfgGfgAfCfCfcGfcUfuCfcAfcAfL96	506	994	A-109327.2	uGfuGfgAfaGfcGfgguCfcCfgUfcCfusCfsc	1057
AD-53720.1	A-110593.1	AfcCfcUfcAfuAfGfGfcCfuGfgAfgUfuUfL96	507	1152	A-109341.2	aAfaCfuCfcAfgGfccuAfuGfaGfgGfusGfsc	1058
AD-53721.1	A-110601.1	GfgAfgUfuUfaUfUfCfgGfaAfaAfgCfcAfL96	508	1166	A-109357.2	uGfgCfuUfuUfcCfgaaUfaAfaCfuCfcsAfsg	1059
AD-53722.1	A-110609.1	GfgCfcGfcUfgUfGfUfgGfaCfcUfcUfuUfL96	509	1428	A-109373.2	aAfaGfaGfgUfcCfacaCfaGfcGfgCfcsAfsa	1060
AD-53723.1	A-110617.1	GfgCfaGfaGfaCfUfGfaUfcCfaCfuUfcUfL96	510	1597	A-109389.2	aGfaAfgUfgGfaUfcagUfcUfcUfgCfcsUfsc	1061
AD-53724.1	A-110625.1	GfcAfgCfuGfu UfUfUfgCfaGfgAfcUfgUfL96	511	1721	A-109405.2	aCfaGfuCfcUfgCfaaaAfcAfgCfuGfcsCfsa	1062
AD-53725.1	A-110633.1	GfgGfuGfaGfgGfUfGfuCfuAfcGfcCfaUfL96	512	1910	A-109421.2	aUfgGfcGfuAfgAfcacCfcUfcAfcCfcsCfsc	1063
AD-53679.1	A-110547.1	CfuAfcGfuGfgUfGfGfuGfcUfgAfaGfgAfL96	513	593	A-109249.2	uCfcUfuCfaGfcAfccaCfcAfcGfuAfgsGfsu	1064
AD-53680.1	A-110555.1	CfaAfgAfuCfcUfGfCfaUfgUfcUfuCfcAfL96	514	689	A-109265.2	uGfgAfaGfaCfaUfgcaGfgAfuCfuUfgsGfsu	1065
AD-53681.1	A-110563.1	UfcGfaGfgAfgGfAfCfuCfcUfcUfgUfcUfL96	515	790	A-109281.2	aGfaCfaGfaGfgAfgucCfuCfcUfcGfasUfsg	1066
AD-53682.1	A-110571.1	GfuAfuCfuCfcUfAfGfaCfaCfcAfgCfaUfL96	516	908	A-109297.2	aUfgCfuGfgUfgUfcuaGfgAfgAfuAfcsAfsc	1067
AD-53683.1	A-110579.1	GfaGfuGfaCfcAfCfCfgGfgAfaAfuCfgAfL96	517	932	A-109313.2	uCfgAfuUfuCfcCfgguGfgUfcAfcUfcsUfsg	1068
AD-53684.1	A-110587.1	CfgGfgAfcCfcGfCfUfuCfcAfcAfgAfcAfL96	518	998	A-109329.2	uGfuCfuGfuGfgAfagcGfgGfuCfcCfgsUfsc	1069
AD-53726.1	A-110594.1	CfcCfuCfaUfaGfGfCfcUfgGfaGfuUfuAfL96	519	1153	A-109343.2	uAfaAfcUfcCfaGfgccUfaUfgAfgGfgsUfsg	1070
AD-53727.1	A-110602.1	GfuUfuAfuUfcGfGfAfaAfaGfcCfaGfcUfL96	520	1169	A-109359.2	aGfcUfgGfcUfuUfuccGfaAfuAfaAfcsUfsc	1071

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53728.1	A-110610.1	UfgUfgUfgGfaCfCfUfcUfuUfgCfcCfcAfL96	521	1434	A-109375.2	uGfgGfgCfaAfaGfaggUfcCfaCfaCfasGfsc	1072
AD-53729.1	A-110618.1	CfaGfaGfaCfuGfAfUfcCfaCfuUfcUfcUfL96	522	1599	A-109391.2	aGfaGfaAfgUfgGfaucAfgUfcUfcUfgsCfsc	1073
AD-53730.1	A-110626.1	UfcUfgCfcGfgGfCfCfcAfcAfaCfgCfuUfL96	523	1885	A-109407.2	aAfgCfgUfuGfuGfggcCfcGfgCfaGfasCfsc	1074
AD-53731.1	A-110634.1	GfgUfgAfgGfgUfGfUfcUfaCfgCfcAfuUfL96	524	1911	A-109423.2	aAfuGfgCfgUfaGfacaCfcCfuCfaCfcsCfsc	1075
AD-53685.1	A-110548.1	CfcCfgCfcGfgGfGfAfuAfcCfuCfaCfcAfL96	525	670	A-109251.2	uGfgUfgAfgAfgGfuAfuccCfcGfgCfgGfgsCfsa	1076
AD-53687.1	A-110564.1	CfgAfgGfaGfgAfCfUfcCfuCfuGfuCfuUfL96	526	791	A-109283.2	aAfgAfcAfgAfgGfaguCfcUfcCfuCfgsAfsu	1077
AD-53688.1	A-110572.1	UfaUfcUfcCfuAfGfAfcAfcCfaGfcAfuAfL96	527	909	A-109299.2	uAfuGfcUfgGfuGfucuAfgGfaGfaUfasCfsa	1078
AD-53689.1	A-110580.1	GfgAfaAfuCfgAfGfGfgCfaGfgGfuCfaUfL96	528	944	A-109315.2	aUfgAfcCfcUfgCfccuCfgAfuUfuCfcsCfsg	1079
AD-53690.1	A-110588.1	UfcCfaCfaGfaCfAfGfgCfcAfgCfaAfgUfL96	529	1009	A-109331.2	aCfuUfgCfuGfgCfcugUfcUfgUfgGfasAfsg	1080
AD-53732.1	A-110595.1	CfcUfcAfuAfgGfCfCfuGfgAfgUfuUfaUfL96	530	1154	A-109345.2	aUfaAfaCfuCfcAfggcCfuAfuGfaGfgsGfsu	1081
AD-53733.1	A-110603.1	GfgGfcUfgGfgGfUfCfgUfgCfuGfgUfcAfL96	531	1279	A-109361.2	uGfaCfcAfgCfaCfgacCfcCfaGfcCfcsUfsc	1082
AD-53734.1	A-110611.1	GfgGfaGfgAfcAfUfCfaUfuGfgUfgCfcUfL96	532	1456	A-109377.2	aGfgCfaCfcAfaUfgauGfuCfcUfcCfcsCfsu	1083
AD-53735.1	A-110619.1	AfcUfgAfuCfcAfCfUfuCfuCfuGfcCfaAfL96	533	1604	A-109393.2	uUfgGfcAfgAfgAfaguGfgAfuCfaGfusCfsu	1084
AD-53736.1	A-110627.1	CfuGfcCfgGfgCfCfCfaCfaAfcGfcUfuUfL96	534	1886	A-109409.2	aAfaGfcGfuUfgUfgggCfcCfgGfcAfgsAfsc	1085
AD-53737.1	A-110635.1	AfgGfgUfg Ufc UfAfCfgCfcAfu U fgCfcAfL96	535	1915	A-109425.2	uGfgCfaAfuGfgCfguaGfaCfaCfcCfusCfsa	1086
AD-53691.1	A-110549.1	CfcGfcCfgGfgGfAfUfaCfcUfcAfcCfaAfL96	536	671	A-109253.2	uUfgGfuGfaGfgUfaucCfcCfgGfcGfgsGfsc	1087
AD-53692.1	A-110557.1	GfuUfgCfcCfcAfUfGfuCfgAfcUfaCfaUfL96	537	770	A-109269.2	aUfgUfaGfuCfgAfcauGfgGfgCfaAfcsUfsu	1088
AD-53693.1	A-110565.1	GfuAfcCfgGfgCfGfGfaUfgAfaUfaCfcAfL96	538	857	A-109285.2	uGfgUfaUfuCfaUfccgCfcCfgGfuAfcsCfsg	1089
AD-53694.1	A-110573.1	UfcUfcCfuAfgAfCfAfcCfaGfcAfuAfcAfL96	539	911	A-109301.2	uGfuAfuGfcUfgGfuguCfuAfgGfaGfasUfsa	1090
AD-53695.1	A-110581.1	AfaUfcGfaGfgGfCfAfgGfgUfcAfuGfgUfL96	540	947	A-109317.2	aCfcAfuGfaCfcCfugcCfcUfcGfaUfusUfsc	1091
AD-53738.1	A-110596.1	CfuCfaUfaGfgCfCfUfgGfaGfuUfuAfuUfL96	541	1155	A-109347.2	aAfuAfaAfcUfcCfaggCfcUfaUfgAfgsGfsg	1092
AD-53739.1	A-110604.1	GfgUfcAfcCfgCfUfGfcCfgGfcAfaCfuUfL96	542	1295	A-109363.2	aAfgUfuGfcCfgGfcagCfgGfuGfaCfcsAfsg	1093

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53740.1	A-110612.1	AfcUfgCfaGfcAfCfCfuGfcUfuUfgUfgUfL96	543	1483	A-109379.2	aCfaCfaAfaGfcAfgguGfcUfgCfaGfusCfsg	1094
AD-53741.1	A-110620.1	AfuCfcAfcUfuCfUfCfuGfcCfaAfaGfaUfL96	544	1608	A-109395.2	aUfcUfuUfgGfcAfgagAfaGfuGfgAfusCfsa	1095
AD-53742.1	A-110628.1	GfcCfcAfcAfaCfGfCfuUfuUfgGfgGfgUfL96	545	1893	A-109411.2	aCfcCfcCfaAfaAfgcgUfuGfuGfgGfcsCfsc	1096
AD-53743.1	A-110636.1	GfuGfuCfuAfcGfCfCfaUfuGfcCfaGfgUfL96	546	1918	A-109427.2	aCfcUfgGfcAfaUfggcGfuAfgAfcAfcsCfsc	1097
AD-53744.1	A-110644.1	GfgAfaUfgCfaAfAfGfuCfaAfgGfaGfcAfL96	547	2180	A-109443.2	uGfcUfcCfuUfgAfcuuUfgCfaUfuCfcsAfsg	1098
AD-53745.1	A-110652.1	UfgAfuGfgCfcCfUfCfaUfcUfcCfaGfcUfL96	548	2906	A-109459.2	aGfcUfgGfaGfaUfgagGfgCfcAfuCfasGfsc	1099
AD-53746.1	A-110660.1	CfuGfaAfgCfcAfAfGfcCfuCfuUfcUfuAfL96	549	3300	A-109475.2	uAfaGfaAfgAfgGfcu u GfgCfu UfcAfgsAfsg	1100
AD-53747.1	A-110668.1	AfcUfgUfcCfcUfCfCfuUfgAfgCfaCfcAfL96	550	3511	A-109491.2	uGfgUfgCfuCfaAfggaGfgGfaCfaGfusUfsg	1101
AD-53748.1	A-110676.1	CfaAfgCfaAfgCfAfGfaCfaUfuUfaUfcUfL96	551	3540	A-109507.2	aGfaUfaAfaUfgUfcugCfuUfgCfuUfgsGfsg	1102
AD-53790.1	A-110683.1	UfaUfcUfuUfuGfGfGfuCfuGfuCfcUfcUfL96	552	3556	A-109521.2	aGfaGfgAfcAfgAfcccAfaAfaGfaUfasAfsa	1103
AD-53791.1	A-110691.1	UfgUfcCfuCfuCfUfGfuUfgCfcUfuUfuUfL96	553	3569	A-109537.2	aAfaAfaGfgCfaAfcagAfgAfgGfaCfasGfsa	1104
AD-53792.1	A-110699.1	UfuGfuAfaCfuUfGfAfaGfaUfaUfuUfaUfL96	554	3620	A-109553.2	aUfaAfaUfaUfcUfucaAfgUfuAfcAfasAfsa	1105
AD-53793.1	A-110707.1	CfuUfuAfcUfcUfGfCfuCfuAfuGfcCfaAfL96	555	3055	A-109569.2	uUfgGfcAfuAfgAfgcaGfaGfuAfaAgsGfsu	1106
AD-53794.1	A-110715.1	AfgGfgGfaAfcAfCfAfgAfcCfaGfgAfaAfL96	556	3370	A-109585.2	uUfuCfcUfgGfuCfuguGfuUfcCfcCfusUfsc	1107
AD-53795.1	A-110723.1	UfuGfgGfuCfuGfUfCfcUfcUfgUfuUfuUfL96	557	3562	A-109601.2	aAfaCfaGfaGfaGfgacAfgAfcCfcAfasAfsa	1108
AD-53749.1	A-110637.1	UfgCfaGfcGfuCfCfAfcAfcAfgCfuCfcAfL96	558	1962	A-109429.2	uGfgAfgCfuGfuGfuggAfcGfcUfgCfasGfsu	1109
AD-53750.1	A-110645.1	AfaUfcCfcGfgCfCfCfcUfcAfgGfaGfcAfL96	559	2204	A-109445.2	uGfcUfcCfuGfaGfgggCfcGfgGfaUfusCfsc	1110
AD-53751.1	A-110653.1	UfuUfcUfgGfaUfGfGfcAfuCfuAfgCfcAfL96	560	2974	A-109461.2	uGfgCfuAfgAfuGfccaUfcCfaGfaAfasGfsc	1111
AD-53752.1	A-110661.1	GfaAfgCfcAfaGfCfCfuCfuUfcUfuAfcUfL96	561	3302	A-109477.2	aGfuAfaGfaAfgAfggcUfuGfgCfuUfcsAfsg	1112
AD-53753.1	A-110669.1	CfcAfgCfcCfcAfCfCfcAfaGfcAfaGfcAfL96	562	3529	A-109493.2	uGfcUfuGfcUfuGfgguGfgGfgCfuGfgsUfsg	1113
AD-53754.1	A-110677.1	AfaGfcAfaGfcAfGfAfcAfuUfuAfuCfuUfL96	563	3541	A-109509.2	aAfgAfuAfaAfuGfucuGfcUfuGfcUfusGfsg	1114
AD-53796.1	A-110684.1	UfcUfuUfuGfgGfUfCfuGfuCfcUfcUfcUfL96	564	3558	A-109523.2	aGfaGfaGfgAfcAfgacCfcAfaAfaGfasUfsa	1115

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53797.1	A-110692.1	GfuCfcUfcUfcUfGfUfuGfcCfuUfuUfuAfL96	565	3570	A-109539.2	uAfaAfaAfgGfcAfacaGfaGfaGfgAfcsAfsg	1116
AD-53798.1	A-110700.1	UfgUfaAfcUfuGfAfAfgAfuAfuUfuAfuUfL96	566	3621	A-109555.2	aAfuAfaAfuAfuCfuucAfaGfuUfaCfasAfsa	1117
AD-53799.1	A-110708.1	UfuUfaCfuCfuGfCfUfcUfaUfgCfcAfgAfL96	567	3056	A-109571.2	uCfuGfgCfaUfaGfagcAfgAfgUfaAfasGfsg	1118
AD-53800.1	A-110716.1	CfcAfaGfcAfaGfCfAfgAfcAfuUfuAfuUfL96	568	3539	A-109587.2	aAfuAfaAfuGfuCfugcUfuGfcUfuGfgsGfsu	1119
AD-53801.1	A-110724.1	UfgGfgUfcUfgUfCfCfuCfuCfuGfuUfgAfL96	569	3563	A-109603.2	uCfaAfcAfgAfgAfggaCfaGfaCfcCfasAfsa	1120
AD-53755.1	A-110638.1	GfcAfuGfgGfgAfCfCfcGfuGfuCfcAfcUfL96	570	1996	A-109431.2	aGfuGfgAfcAfcGfgguCfcCfcAfuGfcsUfsg	1121
AD-53757.1	A-110654.1	UfcUfgGfaUfgGfCfAfuCfuAfgCfcAfgAfL96	571	2976	A-109463.2	uCfuGfgCfuAfgAfugcCfaUfcCfaGfasAfsa	1122
AD-53758.1	A-110662.1	AfaGfcCfaAfgCfCfUfcUfuCfuUfaCfuUfL96	572	3303	A-109479.2	aAfgUfaAfgAfaGfaggCfuUfgGfcUfusCfsa	1123
AD-53759.1	A-110670.1	CfcCfcAfcCfcAfAfGfcAfaGfcAfgAfcAfL96	573	3533	A-109495.2	uGfuCfuGfcUfuGfcuuGfgGfuGfgGfgsCfsu	1124
AD-53760.1	A-110678.1	AfgCfaAfgCfaGfAfCfaUfuUfaUfcUfuUfL96	574	3542	A-109511.2	aAfaGfaUfaAfaUfgucUfgCfuUfgCfusUfsg	1125
AD-53802.1	A-110685.1	UfuUfuGfgGfuCfUfGfuCfcUfcUfgUfL96	575	3560	A-109525.2	aCfaGfaGfaGfgAfcagAfcCfcAfaAfasGfsa	1126
AD-53803.1	A-110693.1	UfuUfcUfaGfaCfCfUfgUfuUfuGfcUfuUfL96	576	3600	A-109541.2	aAfaGfcAfaAfaCfaggUfcUfaGfaAfasAfsg	1127
AD-53804.1	A-110701.1	AfcCfaAfgGfaGfGfCfaGfgAfuUfcUfuUfL96	577	2815	A-109557.2	aAfaGfaAfuCfcUfgccUfcCfuUfgGfusGfsg	1128
AD-53805.1	A-110709.1	UfcAfgCfcAfaCfCfCfgCfuCfcAfcUfaAfL96	578	3161	A-109573.2	uUfaGfuGfgAfgCfgggUfuGfgCfuGfasGfsa	1129
AD-53806.1	A-110717.1	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	579	3544	A-109589.2	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1130
AD-53807.1	A-110725.1	GfgGfuCfuGfuGfuCfCfUfcUfgUfuGfcAfL96	580	3564	A-109605.2	uGfcAfaCfaGfaGfaggAfcAfgAfcCfcsAfsa	1131
AD-53761.1	A-110639.1	CfcCfaCfaAfgCfCfGfcCfuGfuGfcUfgAfL96	581	2080	A-109433.2	uCfaGfcAfcAfgGfcggCfuUfgUfgCfgsUfsg	1132
AD-53762.1	A-110647.1	GfcUfgGfgGfcUfgGfAfgCfuUfuAfaAfaUfL96	582	2481	A-109449.2	aUfuUfuAfaAfgCfucaGfcCfcCfaGfcsCfsc	1133
AD-53763.1	A-110655.1	GfcUfcUfaUfgCfCfAfgGfcUfgUfgCfuAfL96	583	3064	A-109465.2	uAfgCfaCfaGfcCfuggCfaUfaGfaGfcsAfsg	1134
AD-53764.1	A-110663.1	GfuGfaGfgCfuGfGfGfaAfgGfgGfaAfcAfL96	584	3358	A-109481.2	uGfuUfcCfcCfuUfcccAfgCfcUfcAfcsUfsg	1135
AD-53765.1	A-110671.1	CfcCfaCfcCfaAfGfCfaAfgCfaGfaCfaUfL96	585	3534	A-109497.2	aUfgUfcUfgCfuUfgcuUfgGfgUfgGfgsGfsc	1136
AD-53766.1	A-110679.1	GfcAfgAfcAfuUfUfAfuCfuUfuUfgGfgUfL96	586	3547	A-109513.2	aCfcCfaAfaAfgAfuaaAfuGfuCfuGfcsUfsu	1137

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53808.1	A-110686.1	UfuUfgGfgUfcCfuCfuCfuGfuUfL96	587	3561	A-109527.2	aAfcAfgAfgAfgGfacaGfaCfcCfaAfasAfsg	1138
AD-53809.1	A-110694.1	UfuCfuAfgAfcCfUfGfuUfuUfgCfuuUfuUfL96	588	3601	A-109543.2	aAfaAfgCfaAfaAfcagGfuCfuAfgAfasAfsa	1139
AD-53810.1	A-110702.1	GfgAfgGfcAfgGfAfUfuCfuUfcCfcAfuUfL96	589	2820	A-109559.2	aAfuGfgGfaAfgAfaucCfuGfcCfuCfcsUfsu	1140
AD-53811.1	A-110710.1	CfcUfgCfcAfaGfCfUfcAfcAfcAfgCfaAfL96	590	3247	A-109575.2	uUfgCfuGfuGfuGfagcUfuGfgCfaGfgsCfsa	1141
AD-53812.1	A-110718.1	AfaGfcAfgAfcAfUfUfuAfuCfuUfuUfgAfL96	591	3545	A-109591.2	uCfaAfaAfgAfuAfaauGfuCfuGfcUfusGfsc	1142
AD-53813.1	A-110726.1	UfcUfaGfaCfcUfGfUfuUfuGfcUfuUfuUfL96	592	3602	A-109607.2	aAfaAfaGfcAfaAfacaGfgUfcUfaGfasAfsa	1143
AD-53767.1	A-110640.1	GfaGfgCfcAfcGfAfGfgUfcAfgCfcCfaAfL96	593	2099	A-109435.2	uUfgGfgCfuGfaCfcucGfuGfgCfcUfcsAfsg	1144
AD-53768.1	A-110648.1	GfgAfgGfuGfcCfAfGfgAfaGfcUfcCfcUfL96	594	2650	A-109451.2	aGfgGfaGfcUfuCfcugGfcAfcCfuCfcsAfsc	1145
AD-53769.1	A-110656.1	CfuCfaGfcCfaAfCfCfcGfcUfcCfaCfuAfL96	595	3160	A-109467.2	uAfgUfgGfaGfcGfggUfgGfcUfgAfgsAfsc	1146
AD-53770.1	A-110664.1	GfgCfuGfgGfaAfGfCfgGfaAfcAfcAfgAfL96	596	3362	A-109483.2	uCfuGfuGfuUfcCfccuUfcCfcAfgCfcsUfsc	1147
AD-53771.1	A-110672.1	CfcAfcCfcAfaGfCfAfaGfcAfgAfcAfuUfL96	597	3535	A-109499.2	aAfuGfuCfuGfcUfugcUfuGfgGfuGfgsGfsg	1148
AD-53772.1	A-110680.1	AfgAfcAfuUfuAfUfCfuUfuUfgGfgUfcUfL96	598	3549	A-109515.2	aGfaCfcCfaAfaAfgauAfaAfuGfuCfusGfsc	1149
AD-53814.1	A-110687.1	GfgUfcUfgUfcCfUfCfuCfuGfuUfgCfcUfL96	599	3565	A-109529.2	aGfgCfaAfcAfgAfgagGfaCfaGfaCfcsCfsa	1150
AD-53815.1	A-110695.1	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	600	3603	A-109545.2	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1151
AD-53816.1	A-110703.1	GfaGfgCfaGfgAfUfUfcUfuCfcCfaUfgAfL96	601	2821	A-109561.2	uCfaUfgGfgAfaGfaauCfcUfgCfcUfcsCfsu	1152
AD-53817.1	A-110711.1	CfcAfaGfcUfcAfCfAfcAfgCfaGfgAfaAfL96	602	3251	A-109577.2	uUfuCfcUfgCfuGfuguGfaGfcUfuGfgsCfsa	1153
AD-53818.1	A-110719.1	AfgCfaGfaCfaUfUfUfaUfcUfuUfuGfgAfL96	603	3546	A-109593.2	uCfcAfaAfaGfaUfaaaUfgUfcUfgCfusUfsg	1154
AD-53819.1	A-110727.1	GfuAfaCfuUfgAfAfGfaUfaUfuUfuUfaUfL96	604	3622	A-109609.2	aAfaUfaAfaUfaUfcuuCfaAfgUfuAfcsAfsa	1155
AD-53773.1	A-110641.1	CfaCfgAfgGfuCfAfGfcCfcAfaCfcAfgUfL96	605	2104	A-109437.2	aCfuGfgUfuGfgGfcugAfcCfuCfgUfgsGfsc	1156
AD-53774.1	A-110649.1	AfcUfgUfgGfgGfCfAfuUfuCfaCfcAfuUfL96	606	2676	A-109453.2	aAfuGfgUfgAfaAfugcCfcCfaCfaGfusGfsa	1157
AD-53776.1	A-110665.1	GfaAfgGfgGfaAfCfAfcAfgAfcCfaGfgAfL96	607	3368	A-109485.2	uCfcUfgGfuCfuGfuguUfcCfcCfuUfcsCfsc	1158
AD-53777.1	A-110673.1	CfaCfcCfaAfgCfAfAfgCfaGfaCfaUfuUfL96	608	3536	A-109501.2	aAfaUfgUfcUfgCfuugCfuUfgGfgUfgsGfsg	1159

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53778.1	A-110681.1	AfcAfuUfuAfuCfUfUfuUfgGfgUfcUfgUfL96	609	3551	A-109517.2	aCfaGfaCfcCfaAfaagAfuAfaAfuGfusCfsu	1160
AD-53820.1	A-110688.1	GfuCfuGfuCfcUfCfUfcUfgUfuGfcCfuUfL96	610	3566	A-109531.2	aAfgGfcAfaCfaGfagaGfgAfcAfgAfcsCfsc	1161
AD-53821.1	A-110696.1	UfaGfaCfcUfgUfUfUfuGfcUfuUfuGfuAfL96	611	3604	A-109547.2	uAfcAfaAfaGfcAfaaaCfaGfgUfcUfasGfsa	1162
AD-53822.1	A-110704.1	CfuUfuCfuGfgAfUfGfgCfaUfcUfaGfcAfL96	612	2973	A-109563.2	uGfcUfaGfaUfgCfcauCfcAfgAfaAfgsCfsu	1163
AD-53823.1	A-110712.1	AfaGfcUfcAfcAfCfAfgCfaGfgAfaCfuUfL96	613	3253	A-109579.2	aAfgUfuCfcUfgCfuguGfuGfaGfcUfusGfsg	1164
AD-53824.1	A-110720.1	GfaCfaUfuUfaUfCfUfuUfuGfgGfuCfuUfL96	614	3550	A-109595.2	aAfgAfcCfcAfaAfagaUfaAfaUfgUfcsUfsg	1165
AD-48400.4	A-98247.3	UfuUfuCfuAfgAfcCfuGfuUfuUfgCfuUfL96	615		A-93455.5	aAfgCfaAfaAfcAfgGfuCfuAfgAfaAfasGfsu	1166
AD-53779.1	A-110642.1	GfgGfaGfgCfcAfGfCfaUfcCfaCfgCfuUfL96	616	2137	A-109439.2	aAfgCfgUfgGfaUfgcuGfgCfcUfcCfcsUfsg	1167
AD-53780.1	A-110650.1	CfcAfcCfaAfgGfAfGfgCfaGfgAfuUfcUfL96	617	2813	A-109455.2	aGfaAfuCfcUfgCfcucCfuUfgGfuGfgsAfsg	1168
AD-53781.1	A-110658.1	GfcCfaAfgCfuCfAfCfaCfaGfcAfgGfaAfL96	618	3250	A-109471.2	uUfcCfuGfcUfgUfgugAfgCfuUfgGfcsAfsg	1169
AD-53782.1	A-110666.1	AfaGfgGfgAfaCfAfCfaGfaCfcAfgGfaAfL96	619	3369	A-109487.2	uUfcCfuGfgUfcUfgugUfuCfcCfcUfusCfsc	1170
AD-53783.1	A-110674.1	AfcCfcAfaGfcAfAfGfcAfgAfcAfuUfuAfL96	620	3537	A-109503.2	uAfaAfuGfuCfuGfcuuGfcUfuGfgGfusGfsg	1171
AD-53784.1	A-110682.1	UfuUfaUfcUfuUfUfGfgGfuCfuGfuCfcUfL96	621	3554	A-109519.2	aGfgAfcAfgAfcCfcaaAfaGfaUfaAfasUfsg	1172
AD-53825.1	A-110689.1	UfcUfgUfcCfuCfUfCfuGfuUfgCfcUfuUfL96	622	3567	A-109533.2	aAfaGfgCfaAfcAfgagAfgGfaCfaGfasCfsc	1173
AD-53826.1	A-110697.1	UfuUfuGfuAfaCfUfUfgAfaGfaUfuUfL96	623	3618	A-109549.2	aAfaUfaUfcUfuCfaagUfuAfcAfaAfasGfsc	1174
AD-53827.1	A-110705.1	UfuCfuGfgAfuGfGfCfaUfcUfaGfcCfaAfL96	624	2975	A-109565.2	uUfgGfcUfaGfaUfgccAfuCfcAfgAfasAfsg	1175
AD-53828.1	A-110713.1	UfgAfaGfcCfaAfGfCfcUfcUfuCfuUfaAfL96	625	3301	A-109581.2	uUfaAfgAfaGfaGfgcuUfgGfcUfuCfasGfsa	1176
AD-53829.1	A-110721.1	UfuAfuCfuUfuUfGfGfgUfcUfgUfcCfuUfL96	626	3555	A-109597.2	aAfgGfaCfaGfaCfccaAfaAfgAfuAfasAfsu	1177
AD-53830.1	A-110872.1	UfuUfuCfuAfgAfCfCfuGfuUfuUfgCfuUfL96	627		A-110873.1	aAfgCfaAfaAfcAfgguCfuAfgAfaAfasGfsu	1178
AD-53785.1	A-110643.1	AfuCfcAfcGfcUfUfCfcUfgCfuGfcCfaUfL96	628	2148	A-109441.2	aUfgGfcAfgCfaGfgaaGfcGfuGfgAfusGfsc	1179
AD-53786.1	A-110651.1	CfaCfcAfaGfgAfGfGfcAfgGfaUfuCfuUfL96	629	2814	A-109457.2	aAfgAfaUfcCfuGfccuCfcUfuGfgUfgsGfsa	1180
AD-53787.1	A-110659.1	CfaAfgCfuCfaCfAfCfaGfcAfgGfaAfcUfL96	630	3252	A-109473.2	aGfuUfcCfuGfcUfgugUfgAfgCfuUfgsGfsc	1181

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53788.1	A-110667.1	GfgGfaAfcAfcAfGfAfcCfaGfgAfaGfcUfL96	631	3372	A-109489.2	aGfcUfuCfcUfgGfucuGfuGfuUfcCfcsCfsu	1182
AD-53789.1	A-110675.1	CfcCfaAfgCfaAfGfCfaGfaCfaUfuUfaUfL96	632	3538	A-109505.2	aUfaAfaUfgUfcUfgcuUfgCfuUfgGfgsUfsg	1183
AD-53831.1	A-110690.1	CfuGfuCfcUfcUfCfUfgUfuGfcCfuUfuUfL96	633	3568	A-109535.2	aAfaAfgGfcAfaCfagaGfaGfgAfcAfgsAfsc	1184
AD-53832.1	A-110698.1	UfuUfgUfaAfcUfUfGfaAfgAfuAfuUfuAfL96	634	3619	A-109551.2	uAfaAfuAfuCfuUfcaaGfuUfaCfaAfasAfsg	1185
AD-53833.1	A-110706.1	CfuGfgAfuGfgCfAfUfcUfaGfcCfaGfaAfL96	635	2977	A-109567.2	uUfcUfgGfcUfaGfaugCfcAfuCfcAfgsAfsa	1186
AD-53834.1	A-110714.1	AfgUfgAfgGfcUfGfGfgAfaGfgGfgAfaAfL96	636	3357	A-109583.2	uUfuCfcCfcUfuCfccaGfcCfuCfaCfusGfsu	1187
AD-53835.1	A-110722.1	AfuCfuUfuUfgGfGfUfcUfgUfcCfuCfuUfL96	637	3557	A-109599.2	aAfgAfgGfaCfaGfaccCfaAfaAfgAfusAfsa	1188
AD-48399.1	A-100981.1	CfaCfuUfaCfgCfuGfaGfuAfcUfuCfgAfL96	638		A-100982.1	uCfgAfaGfuAfcUfcAfgCfgUfaAfgUfgsAfsu	1189
AD-53815.5	A-110695.11	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	639	3603	A-109545.18	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1190
AD-53815.4	A-110695.4	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	640	3603	A-109545.5	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1191
AD-56633.1	A-115520.2	cuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	641	3603	A-109545.6	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1192
AD-56617.1	A-115535.1	CfuagAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	642	3603	A-109545.7	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1193
AD-56623.1	A-115536.1	CfuagAfcCfuGfUfUfuUfgcuUfuUfguL96	643	3603	A-109545.8	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1194
AD-56629.1	A-115537.1	CfuagAfccuGfUfUfuUfgcuUfuUfguL96	644	3603	A-109545.9	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1195
AD-56635.1	A-115538.1	CfuagAfccuGfUfUfuugcuUfuuguL96	645	3603	A-109545.10	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1196
AD-56641.1	A-115539.1	CfuagaccuGfUfUfuugcuuuuguL96	646	3603	A-109545.11	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1197
AD-56625.1	A-115542.1	CfuAfGfAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	647	3603	A-109545.12	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1198
AD-56631.1	A-115543.1	CfuAfGfAfcCfuGfUfUfuUfGfCfuUfuUfgUfL96	648	3603	A-109545.13	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1199
AD-56637.1	A-115544.1	CfuAfGfAfcCfuGfUfUfuUfGfCfuUfUfUfgUfL96	649	3603	A-109545.14	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1200
AD-56643.1	A-115545.1	CfuAfGfAfCfCfuGfUfUfuUfGfCfuUfUfUfGfUfL96	650	3603	A-109545.15	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1201
AD-56649.1	A-115546.1	CfUfAfGfAfCfCfuGfUfUfuUfGfCfUfUfUfUfGfUfL96	651	3603	A-109545.16	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1202

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56655.1	A-115547.1	cfUfAfGfAfCfCfCfUfGfUfUfUfUfGfCfUfUfUfUfGfUf L96	652	3603	A-109545.17	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1203
AD-56615.1	A-110695.5	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	653	3603	A-115519.1	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfsa	1204
AD-56621.1	A-115520.1	cuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	654	3603	A-115519.2	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfsa	1205
AD-56627.1	A-115521.1	cuAfgAfcCfuGfUfUfuugCfuUfuugUfL96	655	3603	A-115519.3	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfsa	1206
AD-56639.1	A-115520.3	cuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	656	3603	A-115522.1	ACfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1207
AD-56645.1	A-110695.6	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	657	3603	A-115522.2	ACfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1208
AD-56651.1	A-115523.1	(iC)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	658	3603	A-115524.1	(iA)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfs(iA)	1209
AD-56610.1	A-115523.2	(iC)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	659	3603	A-115525.1	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfs(iA)	1210
AD-56616.1	A-115523.3	(iC)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	660	3603	A-115526.1	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfs(iA)	1211
AD-56622.1	A-115527.1	(iC)uAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	661	3603	A-115526.2	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfs(iA)	1212
AD-56628.1	A-115527.2	(iC)uAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	662	3603	A-115528.1	(iA)caAfaAfgcaAfaacAfgGfuCfuAfgsAfs(iA)	1213
AD-56634.1	A-115529.1	CbuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	663	3603	A-115530.1	AbCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsAb	1214
AD-56640.1	A-115529.2	CbuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	664	3603	A-115531.1	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsAb	1215
AD-56646.1	A-115529.3	CbuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	665	3603	A-115532.1	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfsAb	1216
AD-56652.1	A-115533.1	CbuAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	666	3603	A-115532.2	acaAfaAfgcaAfaacAfgGfuCfuAfgsAfsAb	1217
AD-56611.1	A-115533.2	CbuAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	667	3603	A-115534.1	(iA)caAfaAfgcaAfaacAfgGfuCfuAfgsAfsAb	1218
AD-56647.1	A-110695.7	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	668	3603	A-115540.1	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1219
AD-56653.1	A-115535.2	CfuagAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	669	3603	A-115540.2	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1220
AD-56612.1	A-115536.2	CfuagAfcCfuGfUfUfuUfgcuUfuUfguL96	670	3603	A-115540.3	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1221
AD-56618.1	A-115537.2	CfuagAfccuGfUfUfuUfgcuUfuUfguL96	671	3603	A-115540.4	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1222
AD-56624.1	A-115538.2	CfuagAfccuGfUfUfuugcuUfuuguL96	672	3603	A-115540.5	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1223

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56630.1	A-115539.2	CfuagaccuGfUfUfuugcuuuuguL96	673	3603	A-115540.6	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsasa	1224
AD-56636.1	A-110695.8	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	674	3603	A-115541.1	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1225
AD-56642.1	A-115535.3	CfuagAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	675	3603	A-115541.2	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1226
AD-56648.1	A-115536.3	CfuagAfcCfuGfUfUfuUfgcuUfuUfguL96	676	3603	A-115541.3	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1227
AD-56654.1	A-115537.3	CfuagAfccuGfUfUfuUfgcuUfuUfguL96	677	3603	A-115541.4	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1228
AD-56613.1	A-115538.3	CfuagAfccuGfUfUfuugcuUfuuguL96	678	3603	A-115541.5	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1229
AD-56619.1	A-115539.3	CfuagaccuGfUfUfuugcuuuuguL96	679	3603	A-115541.6	aCfaaaAfgCfaAfaacAfgguCfuAfgsasa	1230
AD-56614.1	A-110695.9	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	680	3603	A-115548.1	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1231
AD-56620.1	A-115542.2	CfuAfGfAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	681	3603	A-115548.2	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1232
AD-56626.1	A-115543.2	CfuAfGfAfcCfuGfUfUfuUfgGfCfuUfuUfgUfL96	682	3603	A-115548.3	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1233
AD-56632.1	A-115544.2	CfuAfGfAfcCfuGfUfUfuUfgGfCfuUfuUfgUfL96	683	3603	A-115548.4	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1234
AD-56638.1	A-115545.2	CfuAfGfAfCfCfuGfUfUfuUfgGfCfuUfUfUfgGfUfL96	684	3603	A-115548.5	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1235
AD-56644.1	A-115546.2	CfUfAfGfAfCfCfuGfUfUfuUfgGfCfUfUfUfUfgGfUfL 96	685	3603	A-115548.6	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1236
AD-56650.1	A-115547.2	CfUfAfGfAfCfCfUfGfUfUfUfUfgGfCfUfUfUfUfGfUf L96	686	3603	A-115548.7	aCfaAfAfAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1237
AD-56656.1	A-110695.10	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	687	3603	A-115549.1	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1238
AD-56662.1	A-115542.3	CfuAfGfAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	688	3603	A-115549.2	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1239
AD-56668.1	A-115543.3	CfuAfGfAfcCfuGfUfUfuUfGfCfuUfuUfgUfL96	689	3603	A-115549.3	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1240
AD-56673.1	A-115544.3	CfuAfGfAfcCfuGfUfUfuUfGfCfuUfuUfgUfL96	690	3603	A-115549.4	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1241
AD-56678.1	A-115545.3	CfuAfGfAfCfCfuGfUfUfuUfGfCfuUfUfUfgGfUfL96	691	3603	A-115549.5	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1242

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56683.1	A-115546.3	cfUfAfGfAfCfCfuGfUfUfuUfGfCfUfUfUfUfGfUfL 96	692	3603	A-115549.6	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1243
AD-56688.1	A-115547.3	cfUfAfGfAfCfCfUfGfUfUfUfUfGfCfUfUfUfUfGfUf L96	693	3603	A-115549.7	aCfaAfAfAfGfCfaAfaacAfgGfUfCfuAfgsAfsa	1244
AD-56657.1	A-115550.1	CfuAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	694	3603	A-115551.1	aCfAfAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1245
AD-56663.1	A-115552.1	CfuAfgAfcCfuGfUfUfuUfgCfuuuUfgUfL96	695	3603	A-115553.1	aCfaAfAfAfgCfaAfaacAfgGfuCfuAfgsAfsa	1246
AD-56669.1	A-115554.1	CfuAfgAfcCfuGfUfUfuUfgcuUfuUfgUfL96	696	3603	A-115555.1	aCfaAfaAfGfCfaAfaacAfgGfuCfuAfgsAfsa	1247
AD-56674.1	A-115556.1	CfuAfgAfcCfuGfUfUfuugCfuUfuUfgUfL96	697	3603	A-115557.1	aCfaAfaAfgCfAfAfaacAfgGfuCfuAfgsAfsa	1248
AD-56679.1	A-115558.1	CfuAfgAfccuGfUfUfuUfgCfuUfuUfgUfL96	698	3603	A-115559.1	aCfaAfaAfgCfaAfaacAfGfGfuCfuAfgsAfsa	1249
AD-56684.1	A-115560.1	CfuAfgacCfuGfUfUfuUfgCfuUfuUfgUfL96	699	3603	A-115561.1	aCfaAfaAfgCfaAfaacAfgGfUfCfuAfgsAfsa	1250
AD-56689.1	A-115535.4	CfuagAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	700	3603	A-115562.1	aCfaAfaAfgCfaAfaacAfgGfuCfUfAfgsAfsa	1251
AD-56693.1	A-115520.4	cuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	701	3603	A-115563.1	aCfaAfaAfgCfaAfaacAfgGfuCfuAfGfsAfsa	1252
AD-56658.1	A-115564.1	CfuAfgAfcCfuGfUfUfuUfgCfuUfUfUfgUfL96	702	3603	A-115565.1	aCfaaaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1253
AD-56664.1	A-115566.1	CfuAfgAfcCfuGfUfUfuUfgCfUfUfuUfgUfL96	703	3603	A-115567.1	aCfaAfaagCfaAfaacAfgGfuCfuAfgsAfsa	1254
AD-56670.1	A-115568.1	CfuAfgAfcCfuGfUfUfuUfGfCfuUfuUfgUfL96	704	3603	A-115569.1	aCfaAfaAfgcaAfaacAfgGfuCfuAfgsAfsa	1255
AD-56680.1	A-115572.1	CfuAfgAfcCfUfGfUfUfuUfgCfuUfuUfgUfL96	705	3603	A-115573.1	aCfaAfaAfgCfaAfaacagGfuCfuAfgsAfsa	1256
AD-56685.1	A-115574.1	CfuAfgAfCfCfuGfUfUfuUfgCfuUfuUfgUfL96	706	3603	A-115575.1	aCfaAfaAfgCfaAfaacAfgguCfuAfgsAfsa	1257
AD-56690.1	A-115542.4	CfuAfGfAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	707	3603	A-115576.1	aCfaAfaAfgCfaAfaacAfgGfucuAfgsAfsa	1258
AD-56694.1	A-115577.1	CfUfAfgAfcCfuGfUfUfu UfgCfu Ufu UfgUfL96	708	3603	A-115578.1	aCfaAfaAfgCfaAfaacAfgGfuCfuagsAfsa	1259
AD-56659.1	A-110695.12	CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	709	3603	A-115579.1	aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1260
AD-56665.1	A-115580.1	AfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	710	3605	A-115581.1	aCfaAfaAfgCfaAfaacAfgGfuCfusAfsg	1261
AD-56671.1	A-115582.1	AfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	711	3605	A-115583.1	aCfAfAfaAfgCfaAfaacAfgGfuCfusAfsg	1262

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56676.1	A-115584.1	AfgAfcCfuGfUfUfuUfgCfuuuUfgUfL96	712	3605	A-115585.1	aCfaAfAfAfgCfaAfaacAfgGfuCfusAfsg	1263
AD-56681.1	A-115586.1	AfgAfcCfuGfUfUfuUfgcuUfuUfgUfL96	713	3605	A-115587.1	aCfaAfaAfGfCfaAfaacAfgGfuCfusAfsg	1264
AD-56686.1	A-115588.1	AfgAfcCfuGfUfUfuugCfuUfuUfgUfL96	714	3605	A-115589.1	aCfaAfaAfgCfAfAfaacAfgGfuCfusAfsg	1265
AD-56691.1	A-115590.1	AfgAfccuGfUfUfuUfgCfuUfuUfgUfL96	715	3605	A-115591.1	aCfaAfaAfgCfaAfaacAfGfGfuCfusAfsg	1266
AD-56695.1	A-115592.1	AfgacCfuGfUfUfuUfgCfuUfuUfgUfL96	716	3605	A-115593.1	aCfaAfaAfgCfaAfaacAfgGfUfCfusAfsg	1267
AD-56660.1	A-115594.1	agAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	717	3605	A-115595.1	aCfaAfaAfgCfaAfaacAfgGfuCfUfsAfsg	1268
AD-56666.1	A-115596.1	AfgAfcCfuGfUfUfuUfgCfuUfUfUfgUfL96	718	3605	A-115597.1	aCfaaaAfgCfaAfaacAfgGfuCfusAfsg	1269
AD-56672.1	A-115598.1	AfgAfcCfuGfUfUfuUfgCfUfUfuUfgUfL96	719	3605	A-115599.1	aCfaAfaagCfaAfaacAfgGfuCfusAfsg	1270
AD-56677.1	A-115600.1	AfgAfcCfuGfUfUfuUfGfCfuUfuUfgUfL96	720	3605	A-115601.1	aCfaAfaAfgcaAfaacAfgGfuCfusAfsg	1271
AD-56682.1	A-115602.1	AfgAfcCfuGfUfUfUfUfgCfuUfuUfgUfL96	721	3605	A-115603.1	aCfaAfaAfgCfaaaacAfgGfuCfusAfsg	1272
AD-56687.1	A-115604.1	AfgAfcCfUfGfUfUfuUfgCfuUfuUfgUfL96	722	3605	A-115605.1	aCfaAfaAfgCfaAfaacagGfuCfusAfsg	1273
AD-56692.1	A-115606.1	AfgAfCfCfuGfUfUfuUfgCfuUfuUfgUfL96	723	3605	A-115607.1	aCfaAfaAfgCfaAfaacAfgguCfusAfsg	1274
AD-56696.1	A-115608.1	AfGfAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	724	3605	A-115609.1	aCfaAfaAfgCfaAfaacAfgGfucusAfsg	1275
AD-56661.1	A-115580.2	AfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	725	3605	A-115610.1	aCfaAfaAfgCfaAfaacAfgGfuCfusasg	1276
AD-56667.1	A-115611.1	gAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	726	3605	A-115612.1	aCfaAfaAfgCfaAfaacAfgGfuCfausa	1277
AD-53806.11	A-110717.10	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	727	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1278
AD-53806.13	A-110717.11	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfL96	728	3544	A-109589.10	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1279
AD-53806.12	A-110717.12	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	729	3544	A-109589.22	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1280
AD-53806.5	A-110717.4	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	730	3544	A-109589.5	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1281
AD-53806.6	A-110717.5	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	731	3544	A-109589.7	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1282
AD-53806.7	A-110717.6	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	732	3544	A-109589.8	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1283
AD-53806.8	A-110717.7	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	733	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1284

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-53806.9	A-110717.8	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	734	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1285
AD-53806.10	A-110717.9	CfaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	735	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1286
AD-56979.1	A-116393.1	caAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	736	3544	A-109589.6	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1287
AD-56979.2	A-116393.2	caAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	737	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1288
AD-56975.3	A-116394.1	(ic)aAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	738	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1289
AD-56975.4	A-116394.2	(ic)aAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	739	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1290
AD-56975.5	A-116394.3	(ic)aAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	740	3544	A-109589.22	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1291
AD-56975.1	A-116394.4	(ic)aAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	741	3544	A-109589.5	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1292
AD-56975.2	A-116394.5	(ic)aAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	742	3544	A-109589.6	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1293
AD-56983.1	A-116400.1	CbaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	743	3544	A-109589.7	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1294
AD-56983.2	A-116400.2	CbaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	744	3544	A-109589.8	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1295
AD-56983.3	A-116400.3	CbaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	745	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1296
AD-56983.4	A-116400.4	CbaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	746	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1297
AD-56983.5	A-116400.5	CbaAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	747	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1298
AD-56977.3	A-116406.1	CfaagCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	748	3544	A-109589.10	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1299
AD-56977.1	A-116406.2	CfaagCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	749	3544	A-109589.11	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1300
AD-56977.2	A-116406.3	CfaagCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	750	3544	A-109589.18	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1301
AD-56976.1	A-116407.1	CfaagCfaGfaCfAfUfuUfaucUfuUfuUfL96	751	3544	A-109589.11	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1302
AD-56976.2	A-116407.2	CfaagCfaGfaCfAfUfuUfaucUfuUfuUfL96	752	3544	A-109589.12	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1303
AD-56980.1	A-116408.1	CfaagCfagaCfAfUfuUfaucUfuUfuUfL96	753	3544	A-109589.12	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1304
AD-56980.2	A-116408.2	CfaagCfagaCfAfUfuUfaucUfuUfuUfL96	754	3544	A-109589.13	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1305
AD-56984.1	A-116409.1	CfaagCfagaCfAfUfuUfaucUfuuuUfL96	755	3544	A-109589.13	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1306

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56984.2	A-116409.2	CfaagCfagaCfAfUfuUfaucUfuuuUfL96	756	3544	A-109589.14	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1307
AD-56987.1	A-116410.1	CfaagCfagaCfAfUfuUfaucUfuuuuL96	757	3544	A-109589.14	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1308
AD-56987.2	A-116410.2	CfaagCfagaCfAfUfuUfaucUfuuuuL96	758	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1309
AD-56991.1	A-116415.1	CfaagCfagaCfAfUfuUfaucuuuuuL96	759	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1310
AD-56993.1	A-116416.1	CfaagcagaCfAfUfuUfaucuuuuuL96	760	3544	A-109589.16	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1311
AD-56995.1	A-116417.1	CfaagcagaCfAfUfuuaucuuuuuL96	761	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1312
AD-56978.1	A-116418.1	CfaAfGfCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	762	3544	A-109589.18	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1313
AD-56978.2	A-116418.2	CfaAfGfCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	763	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1314
AD-56981.1	A-116419.1	CfaAfGfCfaGfaCfAfUfuUfAfUfcUfuUfuUfL96	764	3544	A-109589.19	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1315
AD-56985.1	A-116420.1	CfaAfGfCfaGfaCfAfUfuUfAfUfCfUfuUfuUfL96	765	3544	A-109589.20	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1316
AD-56988.1	A-116421.1	CfaAfGfCfAfGfaCfAfUfuUfAfUfCfUfuUfuUfL96	766	3544	A-109589.21	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1317
AD-56988.2	A-116421.2	CfaAfGfCfAfGfaCfAfUfuUfAfUfCfUfuUfuUfL96	767	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1318
AD-56988.3	A-116421.3	CfaAfGfCfAfGfaCfAfUfuUfAfUfCfUfuUfuUfL96	768	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1319
AD-56982.1	A-116426.1	CfaAfgcaGfaCfAfUfuUfaUfcUfuUfuUfL96	769	3544	A-109589.19	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1320
AD-56982.2	A-116426.2	CfaAfgcaGfaCfAfUfuUfaUfcUfuUfuUfL96	770	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1321
AD-56986.1	A-116428.1	CfaAfgCfagaCfAfUfuUfaUfcUfuUfuUfL96	771	3544	A-109589.20	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1322
AD-56986.2	A-116428.2	CfaAfgCfagaCfAfUfuUfaUfcUfuUfuUfL96	772	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1323
AD-56989.1	A-116430.1	CfaAfgCfaGfacAfUfuUfaUfcUfuUfuUfL96	773	3544	A-109589.21	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1324
AD-56990.1	A-116432.1	CfaAfgCfaGfaCfAfuuUfaUfcUfuUfuUfL96	774	3544	A-109589.9	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1325
AD-56992.1	A-116434.1	CfaAfgCfaGfaCfAfUfuUfaucUfuUfuUfL96	775	3544	A-109589.15	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1326
AD-56992.2	A-116434.2	CfaAfgCfaGfaCfAfUfuUfaucUfuUfuUfL96	776	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1327
AD-56994.1	A-116436.1	CfaAfgCfaGfaCfAfUfuUfaUfcUfuuuUfL96	777	3544	A-109589.22	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1328

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-56994.2	A-116436.2	CfaAfgCfaGfaCfAfUfuUfaUfcUfuuuUfL96	778	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1329
AD-56996.1	A-116438.1	caagCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	779	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1330
AD-57001.1	A-116440.1	CfaAfgcagaCfAfUfuUfaUfcUfuUfL96	780	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1331
AD-57007.1	A-116442.1	CfaAfgCfaGfaCfAfuuuaUfcUfuUfuUfL96	781	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1332
AD-57013.1	A-116444.1	CfaAfgCfaGfaCfAfUfuUfaucuuUfuUfL96	782	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1333
AD-57019.1	A-116446.1	CfaAfgCfaGfaCfAfUfuUfaUfcUfuuuuL96	783	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1334
AD-57022.1	A-116448.1	CfaAfgCfaGfaCfAfUfuUfaUfcUfUfUfuUfL96	784	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1335
AD-57025.1	A-116449.1	CfaAfgCfaGfaCfAfUfuUfaUfCfUfuUfuUfL96	785	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1336
AD-56997.1	A-116450.1	CfaAfgCfaGfaCfAfUfuUfAfaUfcUfuUfuUfL96	786	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1337
AD-57002.1	A-116452.1	CfaAfgCfaGfaCfAfUfUfUfaUfcUfuUfuUfuUfL96	787	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1338
AD-57008.1	A-116453.1	CfaAfgCfaGfAfCfAfUfuUfaUfcUfuUfuUfL96	788	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1339
AD-57014.1	A-116454.1	CfaAfgCfAfGfAfCfAfUfuUfaUfcUfuUfuUfL96	789	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1340
AD-57020.1	A-116455.1	CfAfAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	790	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1341
AD-57020.2	A-116455.2	CfAfAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	791	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1342
AD-57026.1	A-116457.1	CfaAfgCfaGfaCfAfUfuUfaUfcuuUfuUfL96	792	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1343
AD-57003.1	A-116460.1	CfaAfgCfaGfaCfAfUfuuaUfcUfuUfuUfL96	793	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1344
AD-57009.1	A-116462.1	CfaAfgCfaGfaCfauuUfaUfcUfuUfuUfL96	794	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1345
AD-57015.1	A-116464.1	CfaAfgCfaGfacaUfuUfaUfcUfuUfuUfL96	795	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1346
AD-57023.1	A-116467.1	CfaAfgCfaGfaCfAfUfuUfaucUfUfuUfuUfL96	796	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1347
AD-57027.1	A-116469.1	CfaAfgCfaGfaCfAfUfuuaUfcUfUfuUfuUfL96	797	3544	A-109589.23	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1348
AD-56998.1	A-116471.1	CfaAfgCfagaCfAfUfuUfaUfcUfUfuUfuUfL96	798	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1349
AD-57004.1	A-116473.1	CfaAfgcaGfaCfAfUfuUfaUfcUfUfuUfuUfL96	799	3544	A-109589.17	aAfaAfaGfaUfuAfaAfaugUfcUfgCfuUfgsCfsu	1350

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-57010.1	A-116475.1	CfaagCfaGfaCfAfUfuUfaUfcUfUfuUfL96	800	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1351
AD-57016.1	A-116477.1	caAfgCfaGfaCfAfUfuUfaUfcUfUfuUfL96	801	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1352
AD-56999.2	A-116479.1	CfaAfgCfaGfaCfAfUfuUfAfUfcUfUfuUfL96	802	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1353
AD-56999.1	A-116479.2	CfaAfgCfaGfaCfAfUfuUfAfUfcUfUfuUfL96	803	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1354
AD-57021.1	A-116481.1	CfaAfgCfAfGfaCfAfUfuUfaUfcUfUfuUfL96	804	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1355
AD-57024.1	A-116483.1	CfaAfGfCfaGfaCfAfUfuUfaUfcUfUfuUfL96	805	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1356
AD-57005.1	A-116486.1	CfaAfgCfaGfaCfAfUfuUfaUfcUfUfuuuUfL96	806	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1357
AD-57011.1	A-116488.1	CfaAfgCfaGfaCfAfUfuuaUfcUfUfuUfuUfL96	807	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1358
AD-57017.1	A-116490.1	CfaAfGfCfagaCfAfUfuUfaUfcUfuUfuUfL96	808	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1359
AD-57000.2	A-116492.1	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUfaUfcUf(Teo)Uf(Teo)UfL96	809	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1360
AD-57000.3	A-116492.2	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUfaUfcUf(Teo)Uf(Teo)UfL96	810	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1361
AD-57000.1	A-116492.3	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUfaUfcUf(Teo)Uf(Teo)UfL96	811	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1362
AD-57006.2	A-116494.1	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUf(Aeo)Uf(m5Ceo)Uf(Teo)Uf(Teo)UfL96	812	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1363
AD-57006.3	A-116494.2	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUf(Aeo)Uf(m5Ceo)Uf(Teo)Uf(Teo)UfL96	813	3544	A-109589.23	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1364
AD-57006.1	A-116494.3	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUf(Aeo)Uf(m5Ceo)Uf(Teo)Uf(Teo)UfL96	814	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1365

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-57012.1	A-116498.1	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUfaUfcUf(Teo)Uf(Teo)UbL96	815	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1366
AD-57018.1	A-116500.1	Cf(Aeo)Af(Geo)CfaGfaCfAfUfuUf(Aeo)Uf(m5Ce o)Uf(Teo)Uf(Teo)UbL96	816	3544	A-109589.17	aAfaAfaGfaUfaAfaugUfcUfgCfuUfgsCfsu	1367
AD-53815.1		CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	817	3601		aCfaAfaAfgCfaAfaacAfgGfuCfuAfgsAfsa	1368
AD-57928.40		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	818	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1369
AD-59182.5		CfsusAfgAfcCfuGfUfUfuugCfuuuuguL96	819	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1370
AD-59184.3		CfsusAfgAfcCfuGfuUfuugCfuuuuguL96	820	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1371
AD-59186.3		CfsusAfgAfcCfuGfUfuugCfuuuuguL96	821	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1372
AD-59171.13		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	822	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1373
AD-59176.7		CfsusAfgAfcCfuGfuuuugcuuuuguL96	823	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1374
AD-59170.7		CfsusagacCfuGfuuuugCfuuuuguL96	824	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1375
AD-59175.7		CfsusagacCfuGfuuuugcuuuuguL96	825	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1376
AD-59179.7		csusagacCfuGfuuuugcuuuuguL96	826	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1377
AD-59218.1		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	827	3601		asCfsaAfaAfgCfaAfAfAfcAfgGfuCfuAfgsasa	1378
AD-59222.1		CfsusAfgAfcCfuGfuuuugcuuuuguL96	828	3601		asCfsaAfaAfgCfaAfAfAfcAfgGfuCfuAfgsasa	1379
AD-59226.1		CfsusagacCfuGfuuuugCfuuuuguL96	829	3601		asCfsaAfaAfgCfaAfAfAfcAfgGfuCfuAfgsasa	1380
AD-59230.1		CfsusagacCfuGfuuuugcuuuuguL96	830	3601		asCfsaAfaAfgCfaAfAfAfcAfgGfuCfuAfgsasa	1381
AD-59235.1		csusagacCfuGfuuuugcuuuuguL96	831	3601		asCfsaAfaAfgCfaAfAfAfcAfgGfuCfuAfgsasa	1382
AD-59207.1		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	832	3601		asCfsaAfAfAfgCfaAfaAfcAfgGfuCfuagsasa	1383
AD-59211.1		CfsusAfgAfcCfuGfuuuugcuuuuguL96	833	3601		asCfsaAfAfAfgCfaAfaAfcAfgGfuCfuagsasa	1384
AD-59215.1		CfsusagacCfuGfuuuugCfuuuuguL96	834	3601		asCfsaAfAfAfgCfaAfaAfcAfgGfuCfuagsasa	1385

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-59219.1		CfsusagacCfuGfuuuugcuuuuguL96	835	3601		asCfsaAfaAfgCfaAfaAfcAfgGfuCfuagsasa	1386
AD-59223.1		csusagacCfuGfuuuugcuuuuguL96	836	3601		asCfsaAfaAfgCfaAfaAfcAfgGfuCfuagsasa	1387
AD-59181.5		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgsUfL96	837	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1388
AD-59172.5		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfsgsUfL96	838	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1389
AD-59177.5		CfsusAfgAfcCfuGfUfUfuUfgCfsuUfsuUfsgsUfL9 6	839	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1390
AD-59180.5		CfsusAfgAfcCfuGfUfUfuUfgCfsuUfsuUfsgsUfsL 96	840	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1391
AD-59183.5		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfsgsUfsL96	841	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1392
AD-59185.5		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfsL96	842	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1393
AD-59173.5		CfsusAfgAfcCfuGfUfUfuugCfuuuugsuL96	843	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1394
AD-59232.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	844	3600		PasCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1395
AD-59236.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	845	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1396
AD-59216.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgsUfL96	846	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1397
AD-59220.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfsgsUfL96	847	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1398
AD-59224.1		CfsusAfgAfcCfuGfUfUfuUfgCfsuUfsuUfsgsUfL9 6	848	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1399
AD-59228.1		CfsusAfgAfcCfuGfUfUfuUfgCfsuUfsuUfsgsUfsL 96	849	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1400
AD-59233.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfsgsUfsL96	850	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1401
AD-59237.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfsL96	851	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1402

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-59209.1		CfsusAfgAfcCfuGfUfUfuugCfuuuugsuL96	852	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsasa	1403
AD-59208.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	853	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfsusAfgsasa	1404
AD-59212.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	854	3600		PasCfsaAfaAfsgCfaAfaacAfgGfuCfsuAfgsas a	1405
AD-59210.1		csusAGAccuGuuuuGcuuuuGuL96	855	3601		AscsAAAAGcAAAAcAGGucuAGsasa	1406
AD-59214.1		AsGsAccuGuuuuGcuuuuGuL96	856	3603		AscsAAAAGcAAAAcAGGucusAsG	1407
AD-59227.1		CfsusAfGfAfccuGfuuuuGfcuuuuGfuL96	857	3601		asCfsAfAfAfAfGfcAfAfAfAfcAfGfGfucuAfGfs asa	1408
AD-59231.1		CfsusAfGfAfccuGfuuuuGfcuuuuGfuL96	858	3601		asCfsAfAfAfAfGfcAfAfaacAfGfGfUfcuAfGfsa sa	1409
AD-59198.3		(C3m)usAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	859	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1410
AD-59200.3		(C3m)(U3m)AfgAfcCfuGfUfUfuUfgCfuUfuUfgU fL96	860	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1411
AD-59203.3		(m5Cam)usAfgAfcCfuGfUfUfuUfgCfuUfuUfgUf L96	861	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1412
AD-59204.3		(m5Cam)(Tam)AfgAfcCfuGfUfUfuUfgCfuUfuUf gUfL96	862	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1413
AD-59188.3		(m5Cams)(Tams)AfgAfcCfuGfUfUfuUfgCfuUfu UfgUfL96	863	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1414
AD-59191.3		(m5Cams)usAfgAfcCfuGfUfUfuUfgCfuUfuUfgU	864	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1415

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		fl96					
AD-59213.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	865	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1416
AD-59217.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	866	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAf(G3m)(A3m)a	1417
AD-59221.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	867	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(Aam)a	1418
AD-59225.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	868	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAf(Gam)(Aam)a	1419
AD-59229.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	869	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(Aams)a	1420
AD-59234.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	870	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAf(Gams)(Aams)a	1421
AD-59238.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	871	3601		(A3m)CfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1422
AD-59241.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	872	3601		as(C3m)aAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1423
AD-59245.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	873	3601		(Aam)CfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1424
AD-59250.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	874	3601		as(m5Cam)aAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1425

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-59246.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	875	3602		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfsgsa	1426
AD-59253.2		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	876	3602		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfsgsa	1427
AD-59242.1		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	877	3602		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfsgsa	1428
AD-59253.1		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	878	3602		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfsgsa	1429
AD-59258.1		usasgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	879	3602		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfsgsa	1430
AD-59251.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	880	3603		asCfsaAfaAfgCfaAfaacAfgGfuCfusAfsg	1431
AD-59256.1		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	881	3604		asCfsaAfaAfgCfaAfaacAfgGfuCfsusAf	1432
AD-59260.1		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	882	3605		asCfsaAfaAfgCfaAfaacAfgGfusCfsu	1433
AD-59248.1		gsAfscCfuGfUfUfuUfgCfuUfuUfgUfL96	883	3605		asCfsaAfaAfgCfaAfaacAfgGfusCfsu	1434
AD-59247.1		gsAfscCfuGfUfUfuUfgCfuUfuUfgUfL96	884	3604		asCfsaAfaAfgCfaAfaacAfgGfuCfsusa	1435
AD-59252.1		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	885	3604		asCfsaAfaAfgCfaAfaacAfgGfuCfsusa	1436
AD-59257.1		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	886	3604		asCfsaAfaAfgCfaAfaacAfgGfuCfsusa	1437
AD-59261.1		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	887	3603		asCfsaAfaAfgCfaAfaacAfgGfuCfusasg	1438
AD-59262.1		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	888	3603		asCfsaAfaAfgCfaAfaacAfgGfuCfusasg	1439
AD-59265.1		csusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	889	3603		asCfsaAfaAfgCfaAfaacAfgGfuCfusasg	1440
AD-59196.13		usAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	890	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1441
AD-59189.11		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	891	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1442
AD-59190.3		usCfsuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	892	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1443
AD-59192.3		UfsusCfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	893	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1444
AD-59240.1		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	894	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfuAfgs(A3m)a	1445

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-59244.1		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	895	3601		asCfsaAfaAfsgCfaAfaacAfgGfuCfuAfgsasa	1446
AD-59202.7		(C3m)usagaccuguuuuugcuuuuguL96	896	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1447
AD-59195.5		(C3m)usAfgAfcCfuGfuuuugCfuuuuguL96	897	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1448
AD-59249.1		CfsusAfgAfcCfuGfUfUfuugCfuuuuguL96	898	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1449
AD-59254.1		CfsusAfgAfcCfuGfuuuugCfuuuuguL96	899	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1450
AD-59259.1		(C3 m)usAfgAfcCfuGfuuuugCfuuu uguL96	900	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1451
AD-59264.1		(C3m)usagaccuguuuugcuuuuguL96	901	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1452
AD-59264.2		(C3m)usagaccuguuuugcuuuuguL96	902	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1453
AD-59255.1		CsusagaccuGfUfUfuugcuuuuguL96	903	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3m)a	1454
AD-57928.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	904	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1455
AD-58893.1		CfsuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	905	3601		asCfaAfaAfgCfaAfaacAfgGfuCfuAfgasa	1456
AD-58894.1		CfsAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	906	3601		aCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsaa	1457
AD-58895.1		CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	907	3601		asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1458
AD-58896.1		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	908	3601		aCfaAfaAfgCfaAfaacAfgGfuCfuAfgaa	1459
AD-58897.1		CfsusAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	909	3601		asCfsasAfaAfgCfaAfaacAfgGfuCfuAfsgsasa	1460

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
AD-58898.1		CfsusAfsgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	910	3601		asCfsaAfaAfgCfsaAfaacAfsgGfuCfuAfsgsasa	1461
AD-58899.1		CfsusAfsgAfcCfuGfUfUfuUfgCfuUfuUfsgUfL96	911	3601		asCfsaAfaAfgCfsaAfaacAfsgGfuCfuAfsgsasa	1462
AD-58900.1		CfsasAfgCfaGfaCfAfUfuUfaUfcUfuUfuUfL96	912	NA		asAfsaAfaGfaUfaAfaugUfcUfgCfuUfgscsu	1463
AD-58902.1		UfsusUfuCfuAfgAfCfCfuGfuUfuUfgCfuUfL96	913	3597		asAfsgCfaAfaAfcAfgguCfuAfgAfaAfasgsu	1464
		(A3mx)(G3mx)AfcCfuGfUfUfuUfgCfuUfuUfgUfL 96	914			asCfsaAfaAfgCfaAfaacAfgGfuCfusasg	1465
		(A3mx)(G3mx)AfcCfuGfUfUfuUfgCfuUfuUfgUfL 96	915			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfusasg	1466
		(A3mx)(G3mx)AfcCfuGfUfUfuUfgCfuUfuUfgUfL 96	916			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfu(A3mx) g	1467
		(A3mx)gAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	917			asCfsaAfaAfgCfaAfaacAfgGfuCfusasg	1468
		(A3mx)gAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	918			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfusasg	1469
		(A3mx)gAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	919			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfu(A3mx) g	1470
		(C3mx)(U3mx)AfgAfcCfuGfUfUfuUfgCfuUfuUfg UfL96	920			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1471
		(C3mx)(U3mx)AfgAfcCfuGfUfUfuUfgCfuUfuUfg_	921			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAf(G3	1472
		UfL96				mx)(A3mx)a	
		(C3mx)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	922			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1473
		(C3mx)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	923			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsas a	1474

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		(C3mx)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	924			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAfg(A3mx)a	1475
		(C3mx)uAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	925			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAf(G3mx)(A3mx)a	1476
		(C3mx)usAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	926			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1477
		(Chd)susAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	927			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1478
		(phe)CfsuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	928			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1479
		(phe)CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	929			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1480
		(pshe)CfsuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	930			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1481
		(pshe)CfuAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	931			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1482
		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	932			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfusasg	1483
		AfsgsAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	933			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfu(A3mx)g	1484
		Cfs(Uhd)sAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	934			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1485
		CfsusAfgAf(Chd)CfuGfUfUfuUfgCfuUfuUfgUfL96	935			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1486
		CfsusAfgAfc(Chd)uGfUfUfuUfgCfuUfuUfgUfL96	936			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1487

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		CfsusAfgAfcCf(Uhd)GfUfUfuUfgCfuUfuUfgUfL96	937			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1488
		CfsusAfgAfcCfuGfUfUf(Uhd)UfgCfuUfuUfgUfL96	938			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1489
		CfsusAfgAfcCfuGfUfUfUf(Ggn)CfuUfuUfgUfL96	939			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1490
		CfsusAfgAfcCfuGfUfUfuUfg(Cgn)uUfuUfgUfL96	940			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1491
		CfsusAfgAfcCfuGfUfUfuUfg(Chd)uUfuUfgUfL96	941			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1492
		CfsusAfgAfcCfuGfUfUfuUfgCf(Tgn)UfuUfgUfL96	942			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1493
		CfsusAfgAfcCfuGfUfUfuUfgCf(Uhd)UfuUfgUfL9 6	943			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1494
		CfsusAfgAfcCfuGfUfUfuUfgCfu(Tgn)uUfgUfL96	944			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1495
		CfsusAfgAfcCfuGfUfUfuUfgCfuUf(Tgn)UfgUfL96	945			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1496
		CfsusAfgAfcCfuGfUfUfuUfgCfuUf(Uhd)UfgUfL9 6	946			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1497
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfu(Tgn)gUfL96	947			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1498
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfu(Uhd)gUfL96	948			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1499
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUf(Ggn)UfL9 6	949			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1500
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfg(Tgn)L96	950			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1501
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfg(Uhd)L96	951			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1502

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	952			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1503
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	953			(Agn)CfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1504
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	954			(Agn)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1505
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	955			P(Agn)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1506
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	956			as(Cgn)aAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1507
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	957			asCfs(Agn)AfaAfgCfaAfaacAfgGfuCfuAfgsas a	1508
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	958			asCfsa(Agn)aAfgCfaAfaacAfgGfuCfuAfgsasa	1509
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	959			asCfsaAf(Agn)AfgCfaAfaacAfgGfuCfuAfgsas a	1510
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	960			asCfsaAfa(Agn)gCfaAfaacAfgGfuCfuAfgsasa	1511
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	961			asCfsaAfaAf(Ggn)CfaAfaacAfgGfuCfuAfgsas a	1512
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	962			asCfsaAfaAfg(Cgn)aAfaacAfgGfuCfuAfgsasa	1513
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	963			asCfsaAfaAfgCf(Agn)AfaacAfgGfuCfuAfgsas a	1514
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	964			asCfsaAfaAfgCfa(Agn)aacAfgGfuCfuAfgsasa	1515
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	965			asCfsaAfaAfgCfaAf(Agn)acAfgGfuCfuAfgsas a	1516
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	966			asCfsaAfaAfgCfaAfa(Agn)cAfgGfuCfuAfgsas a	1517

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	967			asCfsaAfaAfgCfaAfaa(Cgn)AfgGfuCfuAfgsas a	1518
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	968			asCfsaAfaAfiCfaAfaacAfiGfuCfuAfisasa	1519
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	969			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfg(A3mx) a	1520
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	970			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3mx) a	1521
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	971			asCfsaAfaAfgCfaAfaacAfgGfuCfuAf(G3mx)(A 3mx)a	1522
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	972			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsas a	1523
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	973			(A3mx)CfsaAfaAfgCfaAfaacAfgGfuCfuAfgsas a	1524
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	974			P(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAfgsa sa	1525
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	975			a(C3mx)aAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1526
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	976			as(C3mx)aAfaAfgCfaAfaacAfgGfuCfuAfgsas a	1527
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	977			(A3mx)(C3mx)aAfaAfgCfaAfaacAfgGfuCfuAf gsasa	1528

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Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	978			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAfg(A3mx)a	1529
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	979			(A3mx)CfsaAfaAfgCfaAfaacAfgGfuCfuAfgs(A3mx)a	1530
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	980			(A3mx)CfaAfaAfgCfaAfaacAfgGfuCfuAf(G3mx)(A3mx)a	1531
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	981			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgasas(phe)	1532
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	982			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgaas(phe)	1533
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	983			sCfsaAfaAfgCfaAfaacAfgGfuCfuAfgaa(phe)	1534
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	984			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsas(phe)	1535
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	985			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgas(phe)	1536
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	986			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfga(phe)	1537
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	987			asCfsaAfaAfgCfaAfaacAfgGf(Uhd)CfuAfgsas	1538
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	988			asCfsaAfaAfgCfaAfaacAfgGfuCf(Uhd)Afgsas	1539
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	989			asCfsaAfaAfg(Chd)aAfaacAfgGfuCfuAfgsasa	1540
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfgUfL96	990			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1541

(continued)

Duplex Name	Sense Oligo Name	Sense Oligo Sequence	SEQ ID NO:	Position relative to NM_174936.3	Antisense Oligo Name	Antisense Oligo Sequence	SEQ ID NO:
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfguL96	991			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1542
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuUfguL96	992			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1543
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	993			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1544
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	994			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1545
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuuguL96	995			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1546
		CfsusAfgAfcCfuGfUfUfuUfgCfuUfuugUfL96	996			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1547
		CfsusAfgAfcCfuGfUfUfuUfgcuuuugUfL96	997			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1548
		CfsusAfgAfcCfuGfUfUfuUfgcuuuugUfL96	998			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1549
		CfsusAfgAfcCfuGfUfUfuUfgcuuuuguL96	999			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1550
		CfsusAfgAfcCfuGfUfUfuUfgcuuuuguL96	1000			asCfsaAfaagCfaAfaacAfgGfucuAfgsasa	1551
		CfsusAfgAfcCfuGfUfUfuUfgUfuUfuUfgUfL96	1001			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1552
		CfsusAfgAfcCfuGfUfUfuUfiCfuUfuUfiUfL96	1002			asCfsaAfaAfgCfaAfaacAfgGfuCfuAfgsasa	1553
		CfsusAfgAfcCfuGfUfUfuUfiCfuUfuUfiUfL96	1003			asCfsaAfaAfiCfaAfaacAfgGfuCfuAfgsasa	1554
		CfsusAfgAfcCfuGfUfUfuUfiCfuUfuUfiUfL96	1004			asCfsaAfaAfiCfaAfaacAfiGfuCfuAfisasa	1555
		CfsusAfiAfcCfuGfUfUfuUfiCfuUfuUfiUfL96	1005			asCfsaAfaAfiCfaAfaacAfiGfuCfuAfisasa	1556

Example 2. *In vitro and in vivo* screening.

[0432] A subset of these duplexes was evaluated for efficacy in single dose free uptake assays in *Cynomolgus* monkey hepatocytes. Briefly, primary *Cynomolgus* monkey hepatocytes (PCH) were treated with the conjugated modified siRNA duplexes at three concentrations, 500nM, 100nM and 10nM. The 100nM and 10nM free uptake assays were performed twice and the data are represented as average message remaining relative to control +/- the standard deviation (SD). The 500nM screen was performed a single time. Table 3 shows the results of these assays.

Table 3. PCSK9 efficacy screen by free uptake in primary *Cynomolgous* monkey hepatocytes.

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-48399	1.08	1.03	0.98	0.09	0.02
AD-48399	0.97	0.95	1.10	0.03	0.09
AD-48399	0.89	0.98	1.02	0.06	0.06
AD-48399	1.04	1.00	1.01	0.02	0.08
AD-48399	0.92	1.03	0.96	0.02	0.09
AD-48399	1.13	1.03	0.96	0.05	0.01
AD-48400	0.48	0.63	0.90	0.04	0.00
AD-48400.4	0.65	0.78	0.89	0.14	0.13
AD-53649.1	0.96	0.96	1.14	0.02	0.07
AD-53650.1	0.97	0.92	1.15	0.01	0.06
AD-53651.1	1.02	0.98	1.15	0.13	0.10
AD-53652.1	0.83	0.89	1.14	0.20	0.05
AD-53653.1	0.85	0.95	1.26	0.04	0.07
AD-53654.1	0.84	0.93	1.19	0.02	0.13
AD-53656.1	0.92	0.92	1.07	0.05	0.03
AD-53657.1	0.92	0.89	1.02	0.05	0.03
AD-53658.1	0.89	0.83	0.97	0.04	0.14
AD-53659.1	0.79	0.82	1.05	0.06	0.13
AD-53660.1	0.89	0.86	0.98	0.07	0.07
AD-53661.1	0.92	1.03	1.07	0.02	0.04
AD-53663.1	0.88	0.90	1.08	0.03	0.02
AD-53664.1	0.95	0.86	1.00	0.09	0.13
AD-53665.1	0.92	0.91	1.05	0.01	0.13
AD-53666.1	0.73	0.80	0.95	0.08	0.02
AD-53667.1	0.95	0.96	1.12	0.06	0.03
AD-53668.1	1.03	0.89	1.17	0.03	0.12
AD-53669.1	1.12	0.90	1.05	0.01	0.15
AD-53670.1	0.85	0.88	1.00	0.06	0.06
AD-53671.1	0.87	0.90	0.93	0.02	0.04
AD-53672.1	0.87	0.86	0.95	0.04	0.16
AD-53674.1	0.69	0.75	0.92	0.08	0.02
AD-53675.1	0.99	0.92	1.17	0.11	0.06

(continued)

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-53676.1	0.90	0.87	1.10	0.03	0.08
AD-53677.1	1.22	0.86	1.12	0.10	0.04
AD-53678.1	1.01	0.98	1.03	0.03	0.12
AD-53679.1	0.96	0.85	1.02	0.04	0.11
AD-53680.1	1.21	0.94	0.99	0.03	0.01
AD-53681.1	1.02	0.94	1.01	0.01	0.11
AD-53682.1	0.98	0.90	1.01	0.06	0.11
AD-53683.1	0.95	0.90	1.01	0.02	0.08
AD-53684.1	1.14	1.01	1.01	0.09	0.07
AD-53685.1	0.96	0.92	1.03	0.00	0.07
AD-53687.1	1.31	0.91	1.02	0.02	0.11
AD-53688.1	0.90	0.95	0.96	0.03	0.03
AD-53689.1	0.97	0.95	1.05	0.04	0.07
AD-53690.1	0.82	0.97	0.99	0.13	0.08
AD-53691.1	0.99	1.01	0.97	0.01	0.12
AD-53692.1	1.11	0.91	1.00	0.04	0.03
AD-53693.1	1.02	0.96	1.02	0.04	0.10
AD-53694.1	1.12	0.98	0.97	0.07	0.06
AD-53695.1	0.97	1.04	0.94	0.11	0.08
AD-53696.1	0.85	0.91	1.23	0.10	0.01
AD-53697.1	0.89	0.91	1.06	0.03	0.00
AD-53698.1	0.90	0.86	1.15	0.06	0.01
AD-53699.1	0.84	0.85	1.07	0.00	0.03
AD-53700.1	0.93	1.02	1.21	0.02	0.15
AD-53701.1	1.01	0.96	1.12	0.00	0.17
AD-53702.1	0.95	0.94	1.06	0.05	0.15
AD-53703.1	0.82	0.85	1.04	0.07	0.13
AD-53704.1	0.92	0.97	0.94	0.04	0.02
AD-53705.1	0.96	0.98	1.00	0.11	0.15
AD-53706.1	0.90	0.97	1.03	0.01	0.20
AD-53707.1	0.86	0.98	1.11	0.14	0.24
AD-53708.1	1.10	0.94	1.05	0.02	0.15
AD-53709.1	0.79	0.84	1.08	0.01	0.18
AD-53710.1	1.03	0.91	1.06	0.01	0.09
AD-53711.1	0.90	0.90	0.99	0.00	0.28
AD-53712.1	0.97	0.92	0.97	0.00	0.12
AD-53713.1	0.98	0.93	1.07	0.01	0.16
AD-53714.1	1.09	0.86	0.99	0.03	0.09

(continued)

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-53715.1	1.04	0.83	0.94	0.06	0.06
AD-53716.1	0.82	0.85	1.02	0.05	0.14
AD-53717.1	0.98	0.94	0.98	0.11	0.12
AD-53718.1	0.89	1.04	1.01	0.18	0.01
AD-53719.1	0.98	1.05	1.05	0.06	0.17
AD-53720.1	1.02	0.88	1.08	0.01	0.15
AD-53721.1	0.88	0.95	1.03	0.07	0.11
AD-53722.1	0.98	0.95	1.01	0.06	0.12
AD-53723.1	0.89	0.89	1.02	0.10	0.06
AD-53724.1	0.98	0.93	1.00	0.13	0.01
AD-53725.1	1.04	1.05	1.09	0.19	0.11
AD-53726.1	0.87	0.88	0.88	0.00	0.02
AD-53727.1	0.82	0.92	1.02	0.05	0.13
AD-53728.1	0.86	0.93	1.06	0.03	0.08
AD-53729.1	0.86	0.81	1.02	0.12	0.03
AD-53730.1	1.01	0.95	1.02	0.07	0.01
AD-53731.1	0.99	0.98	1.00	0.08	0.07
AD-53732.1	0.93	0.86	1.01	0.12	0.11
AD-53733.1	1.06	1.02	1.08	0.05	0.06
AD-53734.1	0.95	0.93	1.04	0.12	0.05
AD-53735.1	1.00	0.93	1.01	0.02	0.06
AD-53736.1	0.90	1.09	1.16	0.05	0.01
AD-53737.1	0.94	0.93	1.00	0.02	0.09
AD-53738.1	0.93	0.79	0.93	0.03	0.01
AD-53739.1	1.11	0.90	0.90	0.05	0.00
AD-53740.1	0.86	0.92	0.97	0.08	0.01
AD-53741.1	0.96	0.84	0.92	0.00	0.07
AD-53742.1	1.03	0.93	1.03	0.04	0.06
AD-53743.1	0.92	0.98	1.05	0.08	0.14
AD-53744.1	0.95	1.02	1.03	0.08	0.12
AD-53745.1	0.81	0.99	1.11	0.10	0.18
AD-53746.1	0.65	0.83	1.04	0.07	0.16
AD-53747.1	0.82	0.88	1.02	0.05	0.13
AD-53748.1	0.46	0.59	0.72	0.06	0.07
AD-53749.1	0.93	0.90	1.04	0.12	0.16
AD-53750.1	0.90	1.02	0.97	0.02	0.10
AD-53751.1	0.92	0.87	1.02	0.19	0.16
AD-53752.1	0.73	0.88	0.99	0.06	0.18

(continued)

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-53753.1	0.87	0.97	1.06	0.07	0.19
AD-53754.1	0.43	0.58	0.72	0.10	0.05
AD-53755.1	1.01	0.99	1.03	0.03	0.02
AD-53757.1	0.98	0.91	1.07	0.05	0.13
AD-53758.1	0.63	0.73	0.92	0.05	0.00
AD-53759.1	0.91	0.92	0.99	0.02	0.08
AD-53760.1	0.51	0.67	0.80	0.03	0.12
AD-53761.1	0.89	1.07	1.10	0.11	0.18
AD-53762.1	1.06	1.00	0.96	0.12	0.10
AD-53763.1	0.95	1.10	1.00	0.07	0.09
AD-53764.1	0.99	0.94	0.99	0.05	0.16
AD-53765.1	0.92	0.87	0.86	0.09	0.11
AD-53766.1	0.75	0.78	0.86	0.09	0.14
AD-53767.1	1.01	1.02	0.97	0.05	0.18
AD-53768.1	0.89	1.07	0.97	0.09	0.15
AD-53769.1	0.89	1.11	0.95	0.05	0.11
AD-53770.1	0.76	1.01	0.98	0.01	0.12
AD-53771.1	0.70	0.74	0.84	0.06	0.12
AD-53772.1	0.72	0.83	0.85	0.04	0.11
AD-53773.1	0.96	1.00	0.98	0.05	0.07
AD-53774.1	0.75	0.92	1.01	0.06	0.14
AD-53776.1	0.78	0.94	0.97	0.11	0.08
AD-53777.1	0.67	0.68	0.74	0.11	0.01
AD-53778.1	0.74	0.73	0.92	0.13	0.14
AD-53779.1	1.00	0.98	0.95	0.14	0.04
AD-53780.1	0.90	0.92	0.98	0.12	0.05
AD-53781.1	0.84	0.95	1.00	0.17	0.06
AD-53782.1	0.87	0.92	0.90	0.11	0.02
AD-53783.1	0.71	0.79	0.78	0.14	0.03
AD-53784.1	0.68	0.82	0.86	0.10	0.10
AD-53785.1	1.10	0.96	0.96	0.09	0.07
AD-53786.1	0.98	0.89	0.95	0.20	0.14
AD-53787.1	1.23	0.93	1.00	0.11	0.21
AD-53788.1	0.95	0.90	0.94	0.17	0.08
AD-53789.1	0.55	0.60	0.78	0.09	0.08
AD-53790.1	0.70	0.91	1.04	0.08	0.16
AD-53791.1	0.47	0.67	0.92	0.12	0.09
AD-53792.1	0.52	0.75	0.89	0.06	0.04

(continued)

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-53793.1	0.88	1.03	1.07	0.20	0.09
AD-53794.1	0.85	1.00	1.09	0.17	0.22
AD-53795.1	0.58	0.71	1.00	0.10	0.12
AD-53796.1	0.62	0.78	0.96	0.07	0.12
AD-53797.1	0.72	0.78	0.93	0.12	0.10
AD-53798.1	0.50	0.55	0.76	0.08	0.03
AD-53799.1	0.98	0.92	1.10	0.11	0.21
AD-53800.1	0.59	0.65	0.87	0.15	0.14
AD-53801.1	0.81	0.84	1.05	0.14	0.18
AD-53802.1	0.68	0.79	1.03	0.13	0.13
AD-53803.1	0.51	0.53	0.77	0.09	0.05
AD-53804.1	0.94	0.86	1.05	0.15	0.15
AD-53805.1	0.95	0.93	1.03	0.12	0.19
AD-53806.1	0.38	0.45	0.78	0.05	0.12
AD-53807.1	0.85	0.95	1.15	0.09	0.24
AD-53808.1	0.81	0.85	0.93	0.08	0.11
AD-53809.1	0.50	0.62	0.77	0.00	0.12
AD-53810.1	0.84	0.82	0.98	0.16	0.22
AD-53811.1	0.94	0.95	1.00	0.10	0.11
AD-53812.1	0.61	0.76	0.97	0.14	0.22
AD-53813.1	0.67	0.76	0.94	0.01	0.15
AD-53814.1	0.58	0.67	0.84	0.11	0.19
AD-53815.1	0.49	0.50	0.72	0.09	0.17
AD-53816.1	0.82	0.91	0.93	0.08	0.10
AD-53817.1	0.92	0.94	1.07	0.13	0.36
AD-53818.1	0.83	0.99	0.99	0.07	0.41
AD-53819.1	0.61	0.75	0.88	0.24	0.16
AD-53820.1	0.71	0.81	0.92	0.17	0.04
AD-53821.1	0.56	0.54	0.68	0.13	0.05
AD-53822.1	1.24	0.88	1.05	0.12	0.17
AD-53823.1	1.03	0.86	0.99	0.11	0.18
AD-53824.1	0.76	0.73	0.93	0.16	0.11
AD-53825.1	0.57	0.63	0.82	0.18	0.04
AD-53826.1	0.54	0.51	0.78	0.08	0.07
AD-53827.1	0.99	0.91	1.05	0.12	0.08
AD-53828.1	0.69	0.77	0.87	0.09	0.16
AD-53829.1	0.72	0.91	0.95	0.11	0.16
AD-53830.1	0.48	0.73	0.76	0.11	0.01

(continued)

DUPLEX ID	PCH 500 nM	PCH 100nM Avg	PCH 10nM Avg	PCH 100nM SD	PCH 10nM SD
AD-53831.1	0.97	0.92	1.00	0.22	0.25
AD-53832.1	0.68	0.63	0.81	0.15	0.02
AD-53833.1	0.92	0.90	0.84	0.20	0.03
AD-53834.1	1.15	0.93	0.86	0.16	0.02
AD-53835.1	0.88	0.79	0.81	0.18	0.03
PBS	0.90	1.02	0.99	0.04	0.15

[0433] The modified and conjugated PCSK9 siRNA duplexes were also evaluated for efficacy by transfection assays in three human cell lines. PCSK9 siRNAs were transfected in three different cell lines, HeLa, Hep3B and HepG2 at two doses, 10nM and 0.1nM. The results of these assays are shown in Table 4 and the data are expressed as a fraction of the message remaining relative to control.

[0434] Figure 1 shows that there is a general reproducibility in the silencing activity of the PCSK9 duplexes between the free uptake assays and the transfection assays.

[0435] The IC_{50} values for selected duplexes by free-uptake in *Cynomologous* cells and by transfection in Hep3B cells are shown in Table 5.

Table 4. PCSK9 efficacy screen by transfection in human cell lines.

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-48399	0.94	0.90	1.18	1.03	1.34	1.05
AD-48399	0.90	1.03	0.87	0.88	0.84	0.91
AD-48399	0.88	1.14	0.90	0.99	0.92	1.04
AD-48399	1.22	0.97	0.95	0.98	0.81	0.92
AD-48399	1.04	0.81	1.01	1.10	1.03	1.09
AD-48399	1.06	1.20	1.14	1.04	1.16	1.01
AD-48400	0.05	0.63	0.10	0.51	0.17	0.69
AD-48400.4	0.06	0.28	0.14	0.31	0.13	0.32
AD-53649.1	0.84	1.05	1.07	0.94	0.97	1.11
AD-53650.1	0.16	0.87	0.41	0.87	0.52	1.12
AD-53651.1	0.47	0.86	0.49	0.92	0.71	1.08
AD-53652.1	0.34	0.93	0.50	0.96	0.40	1.21
AD-53653.1	0.36	0.99	0.43	1.01	0.52	1.13
AD-53654.1	0.85	1.06	0.99	0.92	0.95	1.06
AD-53656.1	0.46	0.92	0.78	0.98	0.80	0.74
AD-53657.1	0.71	0.97	0.75	1.01	0.81	0.94
AD-53658.1	0.32	0.97	0.50	0.91	0.58	1.05
AD-53659.1	0.11	0.86	0.24	0.93	0.22	0.94
AD-53660.1	0.35	1.12	0.43	0.99	0.44	1.31
AD-53661.1	0.94	1.07	0.85	0.95	0.88	0.92
AD-53663.1	0.82	1.03	0.74	1.06	1.04	1.04
AD-53664.1	0.60	0.94	0.61	1.06	0.85	1.28
AD-53665.1	0.33	1.00	0.55	1.01	0.45	1.12

(continued)

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-53666.1	0.09	0.98	0.22	0.97	0.21	1.08
AD-53667.1	0.94	1.07	0.95	0.96	0.95	1.02
AD-53668.1	0.27	0.88	0.36	1.07	0.35	1.13
AD-53669.1	0.81	1.02	0.93	1.08	1.35	1.24
AD-53670.1	0.55	0.94	0.52	0.48	0.45	1.13
AD-53671.1	0.68	1.07	0.78	1.02	0.82	1.27
AD-53672.1	0.22	1.04	0.38	1.06	0.34	1.15
AD-53674.1	0.08	0.67	0.15	0.85	0.15	0.80
AD-53675.1	0.25	1.04	0.43	0.95	0.38	1.04
AD-53676.1	0.81	0.94	0.90	1.14	0.98	1.06
AD-53677.1	0.45	0.90	0.70	0.98	0.70	1.14
AD-53678.1	0.41	1.02	0.72	1.04	0.70	1.15
AD-53679.1	0.44	0.93	0.58	0.88	0.50	0.95
AD-53680.1	0.36	0.99	0.55	0.98	0.52	0.96
AD-53681.1	0.33	0.93	0.57	1.12	0.54	1.11
AD-53682.1	0.84	0.94	0.85	1.06	0.93	1.13
AD-53683.1	0.65	0.78	0.95	1.05	0.73	1.06
AD-53684.1	0.57	0.98	0.79	0.92	0.62	1.08
AD-53685.1	0.85	0.90	0.94	0.95	0.69	0.98
AD-53687.1	0.15	0.83	0.39	1.09	0.34	1.23
AD-53688.1	0.45	0.89	0.72	1.01	0.57	1.19
AD-53689.1	0.56	0.93	1.04	1.14	0.59	1.24
AD-53690.1	0.45	0.79	0.53	1.26	0.41	1.22
AD-53691.1	0.82	1.03	0.91	1.22	0.57	1.05
AD-53692.1	0.68	0.81	0.81	0.89	0.82	1.05
AD-53693.1	0.61	0.92	0.85	0.81	0.53	1.03
AD-53694.1	0.59	0.87	0.58	1.01	0.53	0.82
AD-53695.1	0.91	0.78	1.02	1.23	1.14	1.11
AD-53696.1	0.57	0.98	0.82	1.01	0.68	1.05
AD-53697.1	0.31	1.04	0.40	0.95	0.24	0.90
AD-53698.1	0.17	0.97	0.31	0.92	0.32	0.84
AD-53699.1	0.29	1.00	0.47	0.90	0.47	1.23
AD-53700.1	0.81	1.07	0.94	0.99	0.97	1.08
AD-53701.1	0.89	1.07	0.96	0.84	0.65	0.93
AD-53702.1	0.45	1.03	0.84	1.08	0.72	0.99
AD-53703.1	0.18	0.79	0.28	0.97	0.29	0.90
AD-53704.1	0.77	0.80	0.88	1.06	0.91	0.95
AD-53705.1	0.63	0.89	0.81	1.06	0.76	0.97

(continued)

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-53706.1	0.39	0.82	0.41	1.00	0.48	0.88
AD-53707.1	0.42	0.97	0.60	0.83	0.54	0.80
AD-53708.1	0.49	0.95	0.82	0.96	1.07	1.09
AD-53709.1	0.19	0.90	0.43	0.85	0.38	1.05
AD-53710.1	0.66	1.00	0.82	0.85	0.69	1.08
AD-53711.1	0.40	0.90	0.45	0.95	0.23	1.03
AD-53712.1	0.47	0.99	0.51	0.94	0.62	0.97
AD-53713.1	0.52	1.05	0.69	0.83	0.79	0.94
AD-53714.1	0.43	1.01	0.71	1.11	0.75	1.12
AD-53715.1	0.23	0.99	0.58	1.24	0.58	1.09
AD-53716.1	0.39	1.00	0.52	0.98	0.51	0.80
AD-53717.1	0.20	0.84	0.33	1.02	0.41	1.09
AD-53718.1	0.35	1.08	0.33	1.02	0.45	0.97
AD-53719.1	0.58	0.96	0.74	0.84	0.79	1.01
AD-53720.1	0.31	1.00	0.55	1.09	0.48	1.24
AD-53721.1	0.26	1.02	0.62	0.92	0.49	0.94
AD-53722.1	0.50	0.99	0.86	0.99	0.87	1.26
AD-53723.1	0.28	0.86	0.37	0.92	0.54	1.11
AD-53724.1	0.18	1.11	0.20	0.98	0.36	1.05
AD-53725.1	0.47	1.00	0.63	0.95	0.60	1.04
AD-53726.1	0.19	1.01	0.42	0.96	0.41	1.21
AD-53727.1	0.55	0.82	0.77	1.08	0.68	1.35
AD-53728.1	0.44	0.92	0.65	1.11	0.68	1.44
AD-53729.1	0.11	0.92	0.25	0.94	0.11	1.01
AD-53730.1	0.31	0.91	0.51	1.05	0.59	1.34
AD-53731.1	0.26	0.63	0.42	0.95	0.44	1.07
AD-53732.1	0.17	0.87	0.29	0.99	0.36	0.98
AD-53733.1	1.06	0.72	1.21	1.14	1.07	1.28
AD-53734.1	0.79	0.92	0.93	0.98	0.90	1.33
AD-53735.1	0.54	0.87	0.83	1.12	0.66	1.24
AD-53736.1	0.40	0.69	0.76	1.09	0.76	1.11
AD-53737.1	0.29	0.82	0.41	1.04	0.39	0.96
AD-53738.1	0.19	0.70	0.24	1.09	0.28	1.10
AD-53739.1	0.91	0.94	0.72	1.07	0.78	1.09
AD-53740.1	0.17	1.06	0.42	1.07	0.32	1.05
AD-53741.1	0.17	0.91	0.32	0.99	0.41	1.05
AD-53742.1	0.55	1.07	0.69	0.97	0.72	1.08
AD-53743.1	0.71	0.99	0.75	0.76	0.58	1.08

(continued)

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-53744.1	0.13	0.86	0.50	0.69	0.36	0.87
AD-53745.1	0.46	0.91	0.78	0.72	0.87	0.94
AD-53746.1	0.13	0.82	0.23	0.50	0.28	0.90
AD-53747.1	0.29	1.08	0.54	0.77	0.50	1.07
AD-53748.1	0.04	0.22	0.12	0.21	0.20	0.32
AD-53749.1	0.56	0.76	0.48	0.81	0.53	0.85
AD-53750.1	0.61	0.75	0.69	0.81	0.81	1.07
AD-53751.1	0.25	0.69	0.37	0.72	0.26	0.77
AD-53752.1	0.11	0.43	0.13	0.40	0.16	0.61
AD-53753.1	0.70	0.76	0.75	0.92	0.63	1.09
AD-53754.1	0.06	0.31	0.10	0.34	0.12	0.40
AD-53755.1	0.46	0.91	0.66	0.84	0.56	0.79
AD-53757.1	0.61	0.90	0.50	0.89	0.44	0.91
AD-53758.1	0.11	0.31	0.11	0.29	0.11	0.60
AD-53759.1	0.61	0.87	0.57	0.84	0.56	0.98
AD-53760.1	0.05	0.36	0.14	0.42	0.12	0.53
AD-53761.1	0.95	0.99	0.76	0.72	0.55	0.61
AD-53762.1	0.58	1.18	0.74	0.88	0.69	0.88
AD-53763.1	0.16	0.86	0.19	0.64	0.21	0.75
AD-53764.1	0.70	0.91	0.54	0.85	0.59	0.94
AD-53765.1	0.16	0.63	0.38	0.64	0.30	0.87
AD-53766.1	0.09	0.72	0.16	0.67	0.18	0.63
AD-53767.1	0.30	1.14	0.69	0.83	0.71	0.83
AD-53768.1	0.50	0.98	0.75	0.98	0.52	1.06
AD-53769.1	0.36	1.07	0.26	0.62	0.39	0.83
AD-53770.1	0.27	1.08	0.45	1.00	0.44	1.25
AD-53771.1	0.18	0.62	0.19	0.44	0.21	0.65
AD-53772.1	0.12	0.75	0.30	0.66	0.18	0.85
AD-53773.1	0.39	0.98	0.60	0.84	0.19	1.00
AD-53774.1	0.07	0.54	0.25	0.40	0.20	0.71
AD-53776.1	0.33	0.97	0.45	0.94	0.34	0.95
AD-53777.1	0.06	0.39	0.18	0.30	0.11	0.41
AD-53778.1	0.09	0.72	0.24	0.69	0.23	0.78
AD-53779.1	0.47	0.66	0.68	0.67	0.57	0.81
AD-53780.1	0.29	0.93	0.61	0.71	0.42	0.92
AD-53781.1	0.41	0.99	0.38	0.87	0.28	1.09
AD-53782.1	0.56	0.47	0.56	0.89	0.41	1.16
AD-53783.1	0.16	0.68	0.32	0.46	0.34	0.61

(continued)

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-53784.1	0.15	0.71	0.27	0.72	0.25	0.80
AD-53785.1	0.17	0.90	0.57	0.71	0.29	0.64
AD-53786.1	0.11	0.78	0.28	0.48	0.24	0.74
AD-53787.1	0.34	0.72	0.56	1.04	0.46	0.81
AD-53788.1	0.36	0.83	0.46	0.95	0.32	0.65
AD-53789.1	0.09	0.43	0.18	0.42	0.12	0.47
AD-53790.1	0.10	0.74	0.30	0.65	0.31	0.81
AD-53791.1	0.07	0.51	0.20	0.30	0.16	0.58
AD-53792.1	0.05	0.40	0.11	0.30	0.17	0.64
AD-53793.1	0.23	1.19	0.42	0.84	0.45	1.12
AD-53794.1	0.43	1.15	0.65	0.67	0.42	0.95
AD-53795.1	0.08	0.37	0.15	0.34	0.12	0.48
AD-53796.1	0.07	0.33	0.19	0.49	0.15	0.58
AD-53797.1	0.10	0.43	0.16	0.39	0.20	0.62
AD-53798.1	0.04	0.31	0.09	0.29	0.16	0.60
AD-53799.1	0.22	0.71	0.30	0.85	0.27	0.85
AD-53800.1	0.09	0.34	0.16	0.35	0.14	0.51
AD-53801.1	0.09	0.28	0.25	0.55	0.20	0.54
AD-53802.1	0.10	0.31	0.20	0.40	0.15	0.72
AD-53803.1	0.07	0.27	0.08	0.21	0.14	0.29
AD-53804.1	0.18	0.57	0.29	0.47	0.27	0.79
AD-53805.1	0.69	0.85	0.68	0.85	0.48	1.01
AD-53806.1	0.07	0.38	0.18	0.43	0.13	0.50
AD-53807.1	0.29	0.61	0.26	0.71	0.28	0.68
AD-53808.1	0.15	0.68	0.26	0.50	0.28	0.72
AD-53809.1	0.04	0.23	0.17	0.22	0.12	0.31
AD-53810.1	0.31	0.88	0.30	0.55	0.36	0.85
AD-53811.1	0.28	0.77	0.33	0.57	0.39	0.87
AD-53812.1	0.12	0.69	0.16	0.62	0.22	0.79
AD-53813.1	0.11	0.33	0.18	0.26	0.17	0.40
AD-53814.1	0.12	0.59	0.57	0.60	0.29	0.57
AD-53815.1	0.03	0.27	0.11	0.18	0.18	0.33
AD-53816.1	0.16	0.89	0.24	0.62	0.32	0.75
AD-53817.1	0.26	0.98	0.44	0.69	0.44	1.18
AD-53818.1	0.12	0.71	0.21	0.55	0.21	0.70
AD-53819.1	0.09	0.52	0.12	0.45	0.12	0.46
AD-53820.1	0.20	0.96	0.27	0.67	0.34	0.74
AD-53821.1	0.04	0.29	0.10	0.23	0.13	0.29

(continued)

DUPLEX ID	Hela, 10nM	Hela, 0.1nM	Hep3b, 10nM	Hep3b, 0.1nM	HepG2, 10nM	HepG2, 0.1nM
AD-53822.1	0.54	1.05	0.60	0.91	0.48	0.96
AD-53823.1	0.21	0.76	0.41	0.59	0.33	0.85
AD-53824.1	0.16	0.78	0.40	0.51	0.36	0.70
AD-53825.1	0.05	0.40	0.12	0.31	0.24	0.73
AD-53826.1	0.04	0.34	0.10	0.21	0.20	0.34
AD-53827.1	0.40	1.11	0.40	0.84	0.31	1.15
AD-53828.1	0.17	0.51	0.23	0.55	0.17	1.14
AD-53829.1	0.06	0.71	0.21	0.58	0.24	1.21
AD-53830.1	0.07	0.27	0.06	0.30	0.15	0.43
AD-53831.1	0.09	0.56	0.21	0.39	0.16	0.95
AD-53832.1	0.08	0.52	0.26	0.31	0.11	0.76
AD-53833.1	1.04	1.05	0.74	1.24	0.60	1.58
AD-53834.1	0.70	1.14	0.71	0.85	0.38	1.47
AD-53835.1	0.11	0.43	0.33	0.35	0.09	0.53
PBS	0.67	1.13	0.90	0.90	0.99	0.99

Table 5. PCSK9 IC_{50} values for selected duplexes by free uptake in *Cynomologous* monkey cells and by transfection in the Hep3B human cell line.

	Transfection	Free uptake
Duplex	IC50, nM	IC50, nM
AD-53806.1	0.07	18.00
AD-53748.1	0.06	16.88
AD-53815.1	0.05	39.21
AD-53809.1	0.05	571.00
AD-53821.1	0.05	55.41
AD-53830.1	0.08	ND
AD-53754.1	0.25	67.42
AD-53800.1	0.30	ND
AD-53798.1	0.04	ND
AD-53789.1	0.37	ND
AD-48400.4	0.23	ND

[0436] AD-48400 was also assayed for *in vivo* efficacy in female mice carrying a human PCSK9 transgene randomly inserted into the genome without disruption of the endogenous PCSK9 gene. Briefly, mice were injected subcutaneously with a single 20 mg/kg dose at Day 0, a single 100 mg/kg dose at Day 0, and five 20 mg/kg doses at Days 0, 1, 2, 3, 4, and 5. Serum was collected at Days -6, -3, 0, 1, 2, 3, 4, and 7 and the amount of PCSK9 protein was determined by ELISA assay. The results of these analyses are depicted in Figure 2 and show that there is a dose response effect with AD-48400 conjugated to GalNAc at all three dosages tested.

[0437] The six most efficacious duplexes ideintified by the *in vitro* screens described above, were evaluated for *in vivo* efficacy and duration of response. Transgenic PCSK9 mice were injected at Days 0, 1, 2, 3, and 4 with either 5 mg/kg or 25 mg/kg of AD-48400, AD-53830, AD-53806, AD-53815, AD-53748, or AD-53798. Serum PCSK9 protein levels were determined by ELISA on Days -3, 0, 1, 2, 3, 4, 8, 11. 15. 18, 22, 26, 31, and 36. The results are depicted in Figures 3A and 3B.

Example 3. Lead Optimization.

[0438] Based on the efficacy assays described in Example 2 above, PCSK9 siRNAs based on the parent sequences of AD-53815 and AD-53806 with a variety of chemical modifications were evaluated for efficacy in free uptake assays in primary *Cynomolgous* monkey hepatocytes (PCH) at 200nM, 20nM, 2nM, and 0.2nM. For all doses other than 0.2nM dose, assays were performed twice and data are expressed as the average fraction message remaining relative to control. The 0.2nM dose was assayed a single time. The results of these assays are shown in Table 6.

Table 6. Efficacy screens for lead optimization of AD-53815 and AD-53806 by free uptake in *Cynomolgous* monkey hepatocytes.

Parent duplex	Duplex ID	200nM Avg	20nM Avg	2nM Avg	0.2nM-384	200nM SD	20nM SD	2nM SD
AD-53815	AD-53815.5	0.45	0.48	0.74	0.95	0.05	0.00	0.05
AD-53815	AD-53815.4	0.43	0.54	0.84	0.83	0.00	0.04	0.10
AD-53815	AD-56633.1	0.33	0.52	0.82	0.88	0.04	0.01	0.10
AD-53815	AD-56617.1	0.40	0.65	0.91	1.06	0.03	0.02	0.03
AD-53815	AD-56623.1	0.52	0.61	0.87	1.05	0.03	0.04	0.21
AD-53815	AD-56629.1	0.50	0.62	0.87	1.05	0.04	0.13	0.17
AD-53815	AD-56635.1	0.45	0.71	0.92	1.03	0.03	0.02	0.03
AD-53815	AD-56641.1	0.47	0.73	0.84	1.04	0.04	0.00	0.17
AD-53815	AD-56625.1	0.49	0.55	0.82	1.12	0.01	0.16	0.16
AD-53815	AD-56631.1	0.48	0.57	0.82	1.05	0.04	0.11	0.06
AD-53815	AD-56637.1	0.48	0.58	0.76	1.01	0.01	0.14	0.13
AD-53815	AD-56643.1	0.59	0.77	0.93	1.04	0.05	0.01	0.04
AD-53815	AD-56649.1	0.76	0.87	0.95	1.06	0.02	0.07	0.14
AD-53815	AD-56655.1	0.73	0.86	0.85	0.96	0.01	0.04	0.11
AD-53815	AD-56615.1	0.58	0.70	0.92	0.98	0.00	0.02	0.03
AD-53815	AD-56621.1	0.71	0.76	0.93	0.95	0.18	0.07	0.07
AD-53815	AD-56627.1	0.58	0.72	0.93	0.94	0.01	0.08	0.02
AD-53815	AD-56639.1	0.52	0.57	0.72	0.94	0.16	0.00	0.04
AD-53815	AD-56645.1	0.32	0.49	0.74	0.88	0.03	0.03	0.14
AD-53815	AD-56651.1	0.71	0.94	0.88	0.88	0.08	0.29	0.12
AD-53815	AD-56610.1	0.31	0.57	0.82	0.93	0.02	0.01	0.04
AD-53815	AD-56616.1	0.47	0.68	0.70	1.01	0.06	0.08	0.34
AD-53815	AD-56622.1	0.47	0.66	0.88	0.95	0.06	0.10	0.10
AD-53815	AD-56628.1	1.02	1.15	1.04	0.99	0.00	0.12	0.02
AD-53815	AD-56634.1	0.75	0.90	0.97	1.03	0.11	0.04	0.07
AD-53815	AD-56640.1	0.58	0.76	0.81	1.01	0.10	0.05	0.12
AD-53815	AD-56646.1	0.77	0.94	0.82	0.99	0.09	0.12	0.14
AD-53815	AD-56652.1	0.61	0.74	0.78	0.89	0.00	0.00	0.03
AD-53815	AD-56611.1	0.93	1.02	1.16	0.89	0.05	0.15	0.05
AD-53815	AD-56647.1	0.38	0.58	0.79	0.94	0.05	0.08	0.00
AD-53815	AD-56653.1	0.47	0.46	0.63	0.84	0.12	0.04	0.04

(continued)

Parent duplex	Duplex ID	200nM Avg	20nM Avg	2nM Avg	0.2nM-384	200nM SD	20nM SD	2nM SD
AD-53815	AD-56612.1	0.41	0.61	0.88	0.85	0.03	0.09	0.09
AD-53815	AD-56618.1	0.64	0.60	1.03	1.08	0.21	0.09	0.01
AD-53815	AD-56624.1	0.46	0.61	0.85	1.05	0.04	0.17	0.15
AD-53815	AD-56630.1	0.49	0.69	0.87	1.01	0.01	0.00	0.15
AD-53815	AD-56636.1	0.49	0.57	0.82	1.13	0.01	0.05	0.03
AD-53815	AD-56642.1	0.43	0.55	0.82	1.09	0.00	0.08	0.03
AD-53815	AD-56648.1	0.48	0.66	0.80	0.96	0.00	0.04	0.08
AD-53815	AD-56654.1	0.43	0.53	0.72	0.84	0.01	0.00	0.07
AD-53815	AD-56613.1	0.54	0.61	0.81	0.91	0.16	0.08	0.19
AD-53815	AD-56619.1	0.55	0.67	1.02	1.06	0.04	0.07	0.07
AD-53815	AD-56614.1	0.42	0.56	0.86	0.90	0.05	0.04	0.10
AD-53815	AD-56620.1	0.41	0.52	0.85	0.84	0.01	0.12	0.08
AD-53815	AD-56626.1	0.59	0.68	0.90	1.12	0.01	0.03	0.10
AD-53815	AD-56632.1	0.60	0.73	0.91	1.05	0.04	0.09	0.10
AD-53815	AD-56638.1	0.68	0.89	0.94	1.19	0.03	0.03	0.18
AD-53815	AD-56644.1	0.84	0.89	1.09	1.09	0.08	0.08	0.06
AD-53815	AD-56650.1	0.86	0.95	1.05	1.05	0.10	0.01	0.10
AD-53815	AD-56656.1	0.53	0.64	0.92	0.88	0.09	0.04	0.14
AD-53815	AD-56662.1	0.55	0.61	0.96	1.03	0.02	0.09	0.01
AD-53815	AD-56668.1	0.76	0.79	0.99	1.10	0.07	0.11	0.06
AD-53815	AD-56673.1	0.81	0.87	1.12	1.09	0.01	0.15	0.13
AD-53815	AD-56678.1	0.84	0.76	1.12	1.05	0.04	0.24	0.05
AD-53815	AD-56683.1	0.88	0.93	1.08	1.06	0.05	0.10	0.06
AD-53815	AD-56688.1	0.80	0.86	0.93	0.99	0.10	0.11	0.19
AD-53815	AD-56657.1	0.45	0.63	0.84	0.88	0.20	0.04	0.09
AD-53815	AD-56663.1	0.35	0.49	0.77	1.03	0.00	0.07	0.04
AD-53815	AD-56669.1	0.53	0.68	0.99	1.11	0.00	0.18	0.03
AD-53815	AD-56674.1	0.44	0.64	0.84	1.03	0.06	0.01	0.17
AD-53815	AD-56679.1	0.52	0.67	0.77	1.01	0.01	0.06	0.14
AD-53815	AD-56684.1	0.43	0.59	0.84	1.08	0.01	0.03	0.04
AD-53815	AD-56689.1	0.55	0.57	0.73	0.95	0.09	0.01	0.11
AD-53815	AD-56693.1	0.45	0.48	0.65	0.84	0.04	0.02	0.11
AD-53815	AD-56658.1	0.46	0.55	0.85	0.84	0.21	0.09	0.07
AD-53815	AD-56664.1	0.35	0.60	0.80	0.91	0.13	0.03	0.14
AD-53815	AD-56670.1	0.62	0.61	0.90	1.11	0.17	0.06	0.00
AD-53815	AD-56680.1	0.74	0.90	1.00	0.91	0.05	0.01	0.05
AD-53815	AD-56685.1	0.64	0.64	0.77	1.07	0.15	0.01	0.15

(continued)

Parent duplex	Duplex ID	200nM Avg	20nM Avg	2nM Avg	0.2nM-384	200nM SD	20nM SD	2nM SD
AD-53815	AD-56690.1	0.39	0.61	0.75	0.97	0.13	0.03	0.08
AD-53815	AD-56694.1	0.41	0.53	0.67	0.94	0.01	0.00	0.04
AD-53815	AD-56659.1	0.57	0.58	0.84	0.95	0.25	0.09	0.05
AD-53815	AD-56665.1	0.38	0.51	0.78	1.01	0.05	0.07	0.17
AD-53815	AD-56671.1	0.32	0.45	0.78	0.94	0.03	0.05	0.01
AD-53815	AD-56676.1	0.31	0.55	0.81	1.02	0.03	0.13	0.02
AD-53815	AD-56681.1	0.54	0.75	0.88	1.02	0.02	0.07	0.11
AD-53815	AD-56686.1	0.50	0.74	0.86	1.03	0.01	0.10	0.10
AD-53815	AD-56691.1	0.44	0.56	0.79	1.03	0.01	0.00	0.05
AD-53815	AD-56695.1	0.37	0.70	0.67	0.89	0.01	0.29	0.11
AD-53815	AD-56660.1	0.36	0.73	0.83	0.93	0.02	0.22	0.10
AD-53815	AD-56666.1	0.39	0.47	0.74	0.94	0.02	0.05	0.13
AD-53815	AD-56672.1	0.63	0.55	0.87	1.03	0.25	0.10	0.04
AD-53815	AD-56677.1	0.54	0.70	0.85	0.99	0.24	0.11	0.00
AD-53815	AD-56682.1	0.48	0.57	0.90	0.96	0.11	0.09	0.05
AD-53815	AD-56687.1	0.81	0.94	1.06	1.08	0.07	0.02	0.05
AD-53815	AD-56692.1	0.45	0.64	0.73	0.95	0.03	0.13	0.05
AD-53815	AD-56696.1	0.40	0.48	0.66	0.95	0.01	0.04	0.06
AD-53815	AD-56661.1	0.52	0.54	0.75	0.98	0.22	0.06	0.04
AD-53815	AD-56667.1	0.40	0.68	0.87	1.03	0.03	0.03	0.11
AD-53806	AD-53806.11	0.28	0.44	0.74	0.98	0.05	0.01	0.13
AD-53806	AD-53806.13	0.31	0.36	0.65	0.92	0.01	0.08	0.06
AD-53806	AD-53806.12	0.53	0.56	0.70	1.04	0.00	0.01	0.15
AD-53806	AD-53806.5	0.34	0.54	0.85	0.87	0.01	0.00	0.10
AD-53806	AD-53806.6	0.41	0.51	0.77	0.91	0.05	0.04	0.08
AD-53806	AD-53806.7	0.39	0.58	0.75	0.97	0.02	0.16	0.14
AD-53806	AD-53806.8	0.35	0.49	0.69	0.91	0.06	0.03	0.09
AD-53806	AD-53806.9	0.36	0.55	0.77	1.01	0.04	0.07	0.13
AD-53806	AD-53806.10	0.29	0.44	0.73	0.93	0.04	0.10	0.14
AD-53806	AD-56979.1	0.43	0.50	0.78	0.96	0.01	0.03	0.11
AD-53806	AD-56979.2	0.32	0.47	0.65	1.02	0.02	0.11	0.05
AD-53806	AD-56975.3	0.27	0.57	0.72	0.83	0.01	0.16	0.08
AD-53806	AD-56975.4	0.55	0.67	0.81	0.92	0.11	0.10	0.04
AD-53806	AD-56975.5	0.34	0.54	0.71	0.94	0.04	0.22	0.10
AD-53806	AD-56975.1	0.38	0.53	0.74	0.93	0.13	0.14	0.02
AD-53806	AD-56975.2	0.50	0.62	0.82	0.98	0.09	0.16	0.11
AD-53806	AD-56983.1	0.49	0.72	0.89	1.11	0.10	0.09	0.21