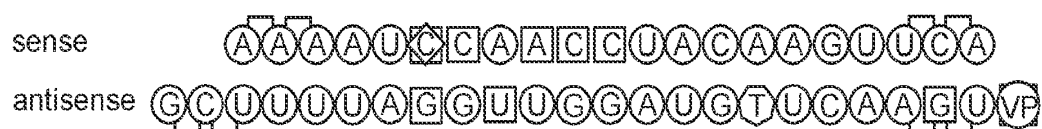
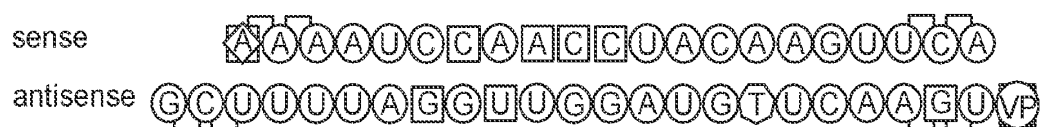


1/22

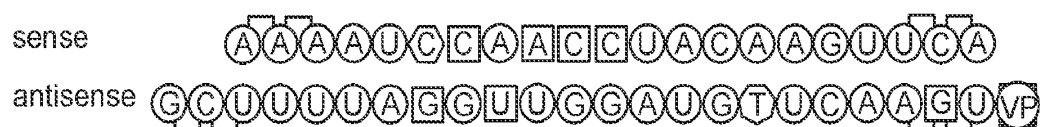
AD-454844



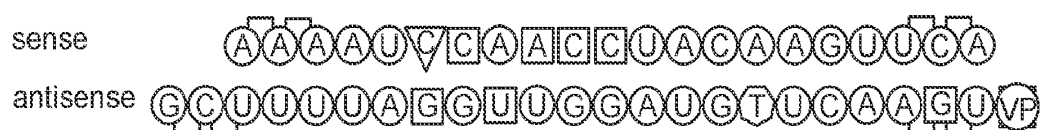
AD-1302922



AD-1302923



AD-1999409



Legend			
 -C16	 -C22	 -C10	 -GNA
 -2' Fluoro	 -2'-O-Methyl	 -Phosphate Mimic	 -PS

FIG. 1A

Type	Diluent						Drug Product					
Formulation	Original		F1		F2		Original DP		F1 DP		F2 DP	
APP DS	0						60 mg/mL					
Unit	Conc (g/L)	Conc. (mM)	Conc (g/L)	Conc. (mM)	Conc (g/L)	Conc. (mM)	Conc (g/L)	Conc. (mM)	Conc (g/L)	Conc. (mM)	Conc (g/L)	Conc. (mM)
di-sodium hydrogen phosphate	0.10	0.7	0	0	0	0	0.065	0.5	0	0	0	0
sodium dihydrogen phosphate	0.05	0.3	0	0	0	0	0.033	0.2	0	0	0	0
Sodium chloride	8.77	150.1	8.77	150.1	8.77	150.1	5.701	97.6	5.701	97.6	5.701	97.6
Potassium chloride	0.22	3.0	0.22	3.0	0	0	0.143	1.9	0.143	1.9	0	0
Magnesium chloride	0.16	0.8	0.16	0.8	0	0	0.104	0.5	0.104	0.5	0	0
Calcium chloride	0.21	1.4	0.21	1.4	0.21	1.4	1.911	13.0	1.911	13.0	1.911	13.0

FIG. 1B

9/22

Legend

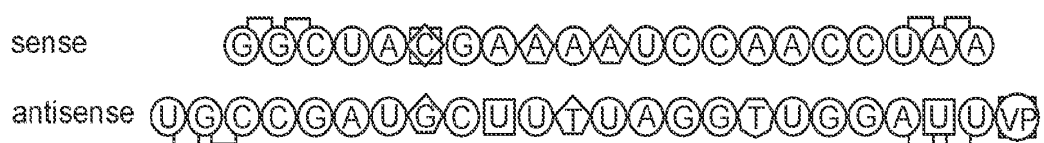
 - C16	 - GNA
 - 2'-O-Methyl	 - DNA
 - 2' Fluoro	 - Phosphate Mimic
 - PS	

AD-961583

sense



antisense



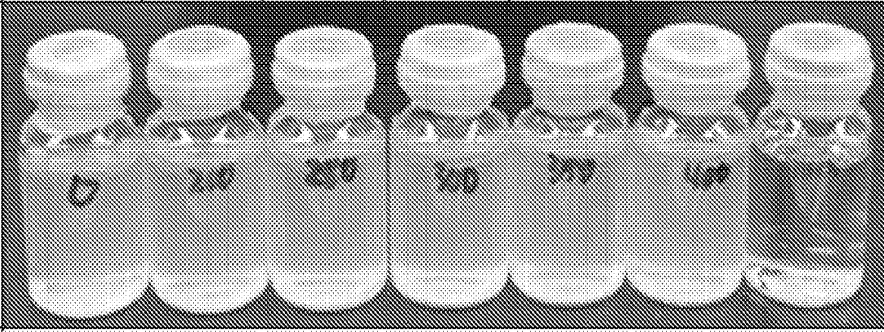
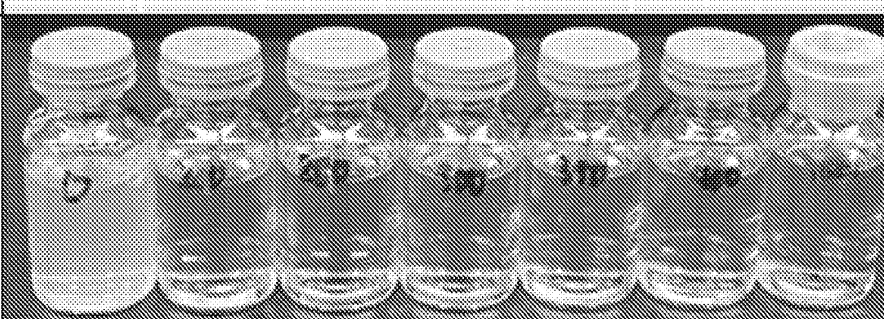
Antisense Addition	0uL	200uL	250uL	300uL	350uL	400uL	RODI
Single Strand excess	2.8% SS	0.8% SS	0.5% SS	0.1% AS	0.6% AS	1.1% AS	-
Before Antisense Addition							
After Antisense Addition							

FIG. 5A

10/22

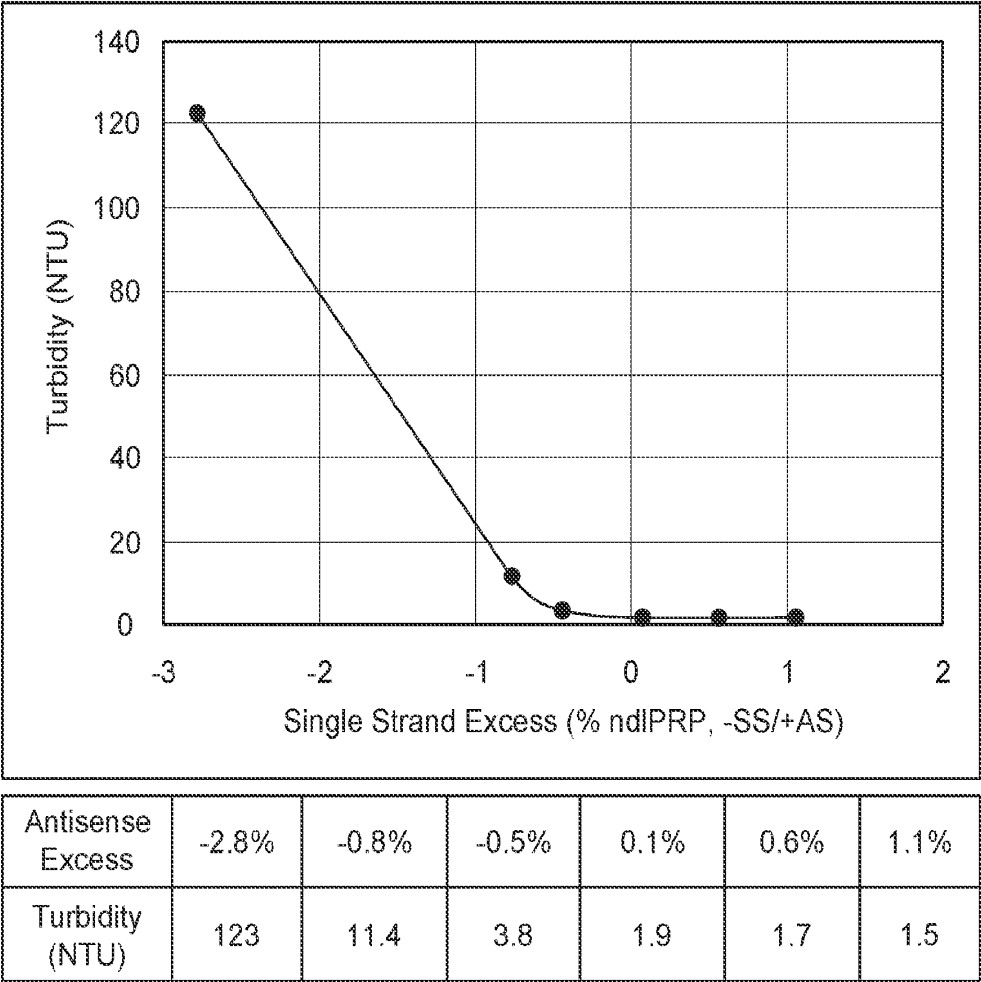


FIG. 5B

11/22

Legend

◊

-C16

○-2'-O-Methyl

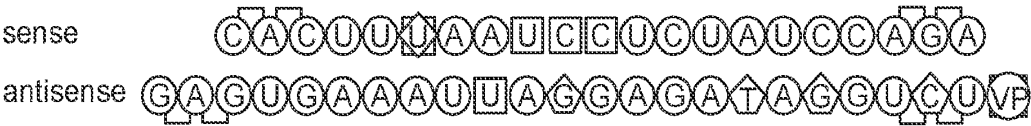
◻-2' Fluoro

◡-DNA

◯-Phosphate Mimic

◻-PS

AD-1395762



Antisense Addition	450uL	400uL	350uL	300uL	250uL	200uL	150uL	100uL	0uL	RODI
Single Strand excess	5.9% AS	4.3% AS	2.8% AS	1.4% AS	1.9% AS	0.5% SS	1.7% SS	3.2% SS	5.8% SS	-
Before Antisense Addition										
After Antisense Addition										

FIG. 6A

12/22

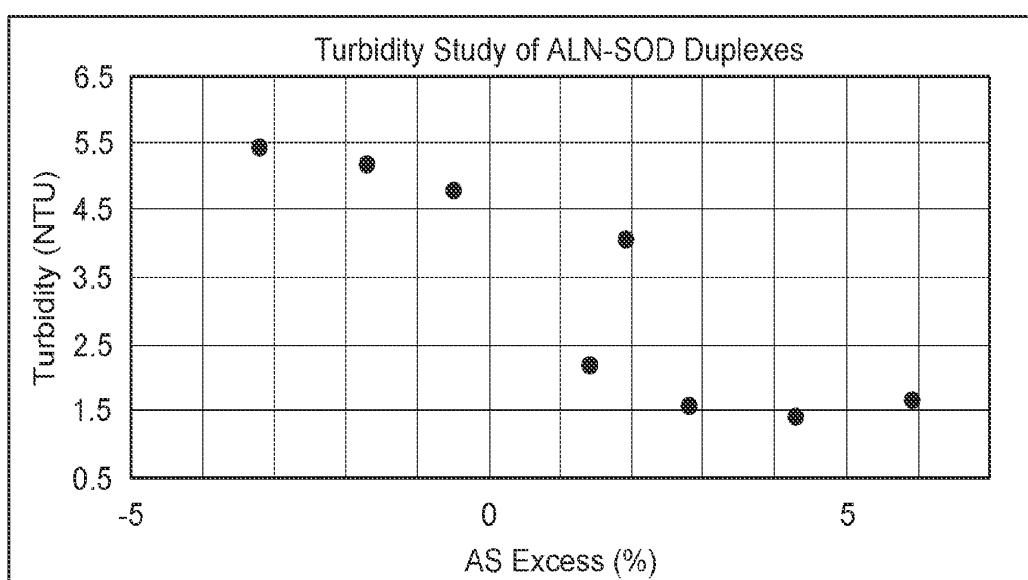
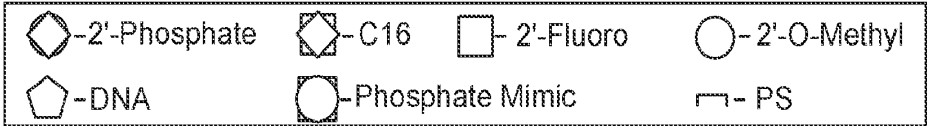
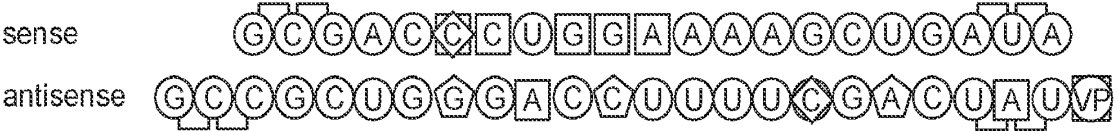


FIG. 6B

13/22



AD-1498524



AS addition (uL)	0	50	100	150	200	250	300	350	400	450
Single strand excess	4.43% SS	2.0% SS	0.1% SS	1.9% AS	4.4% AS	6.8% AS	8.9% AS	11.9% AS	13.6% AS	16.1% AS
Before AS addition										
After AS addition										

FIG. 7A

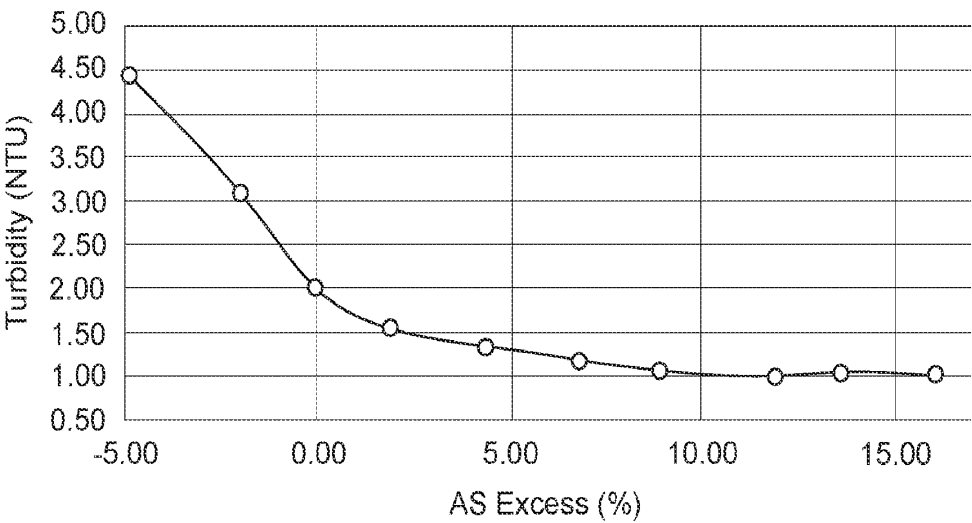


FIG. 7B

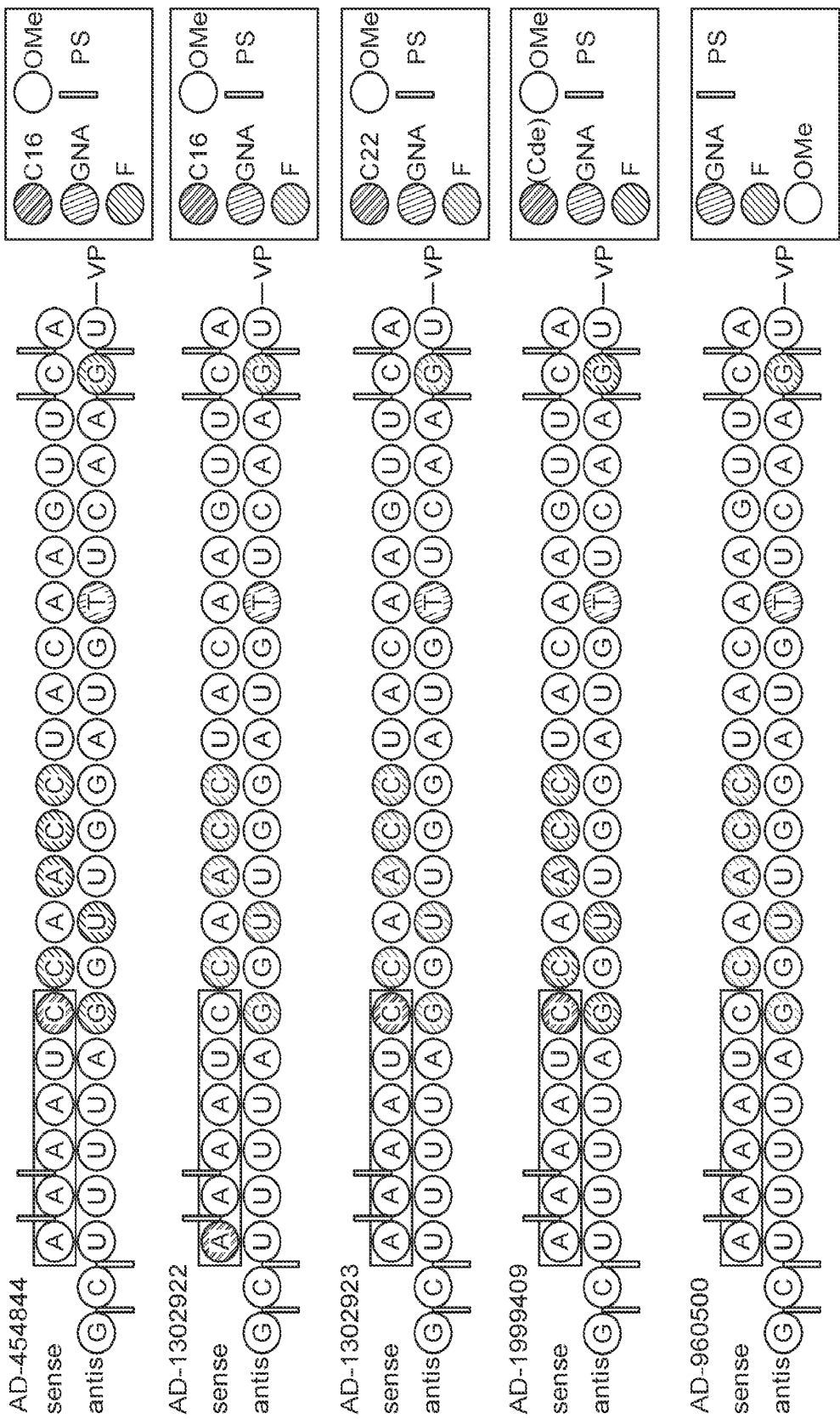


FIG. 8

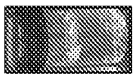
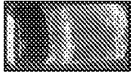
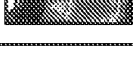
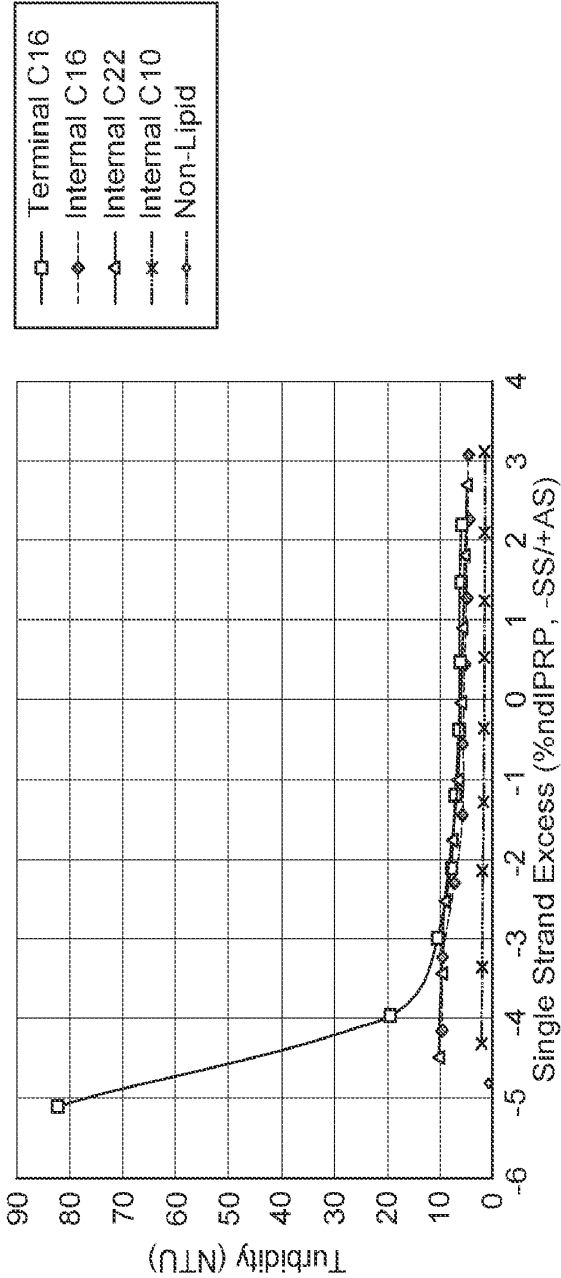
Duplex	AD-960500	AD-454844	AD-454844	AD-1302922	AD-1302922	AD-1302922	AD-1302923	AD-1999409	RODI
Sense Strand Lipid Chemistry	Non-Lipid	Internal C16	Internal C16	Terminal C16	Terminal C16	Internal C22	Internal C10		-
Cation Exchange	Ca	Ca	Mg	Ca	Mg	Ca	Ca		-
Precipitate Observation	-	+	+	++++	++	+	-		-
Duplex after Cation Exchange									

FIG. 9A



16/22

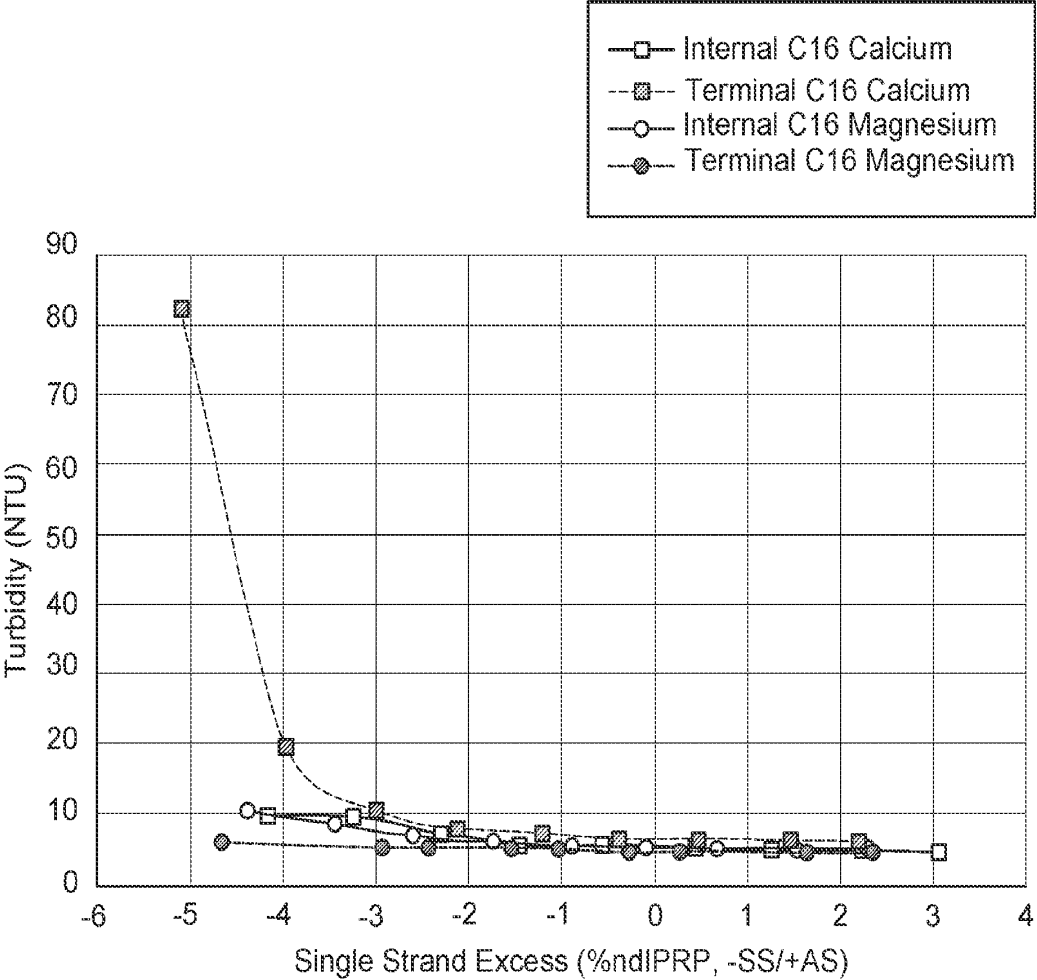


FIG. 9C

17/22

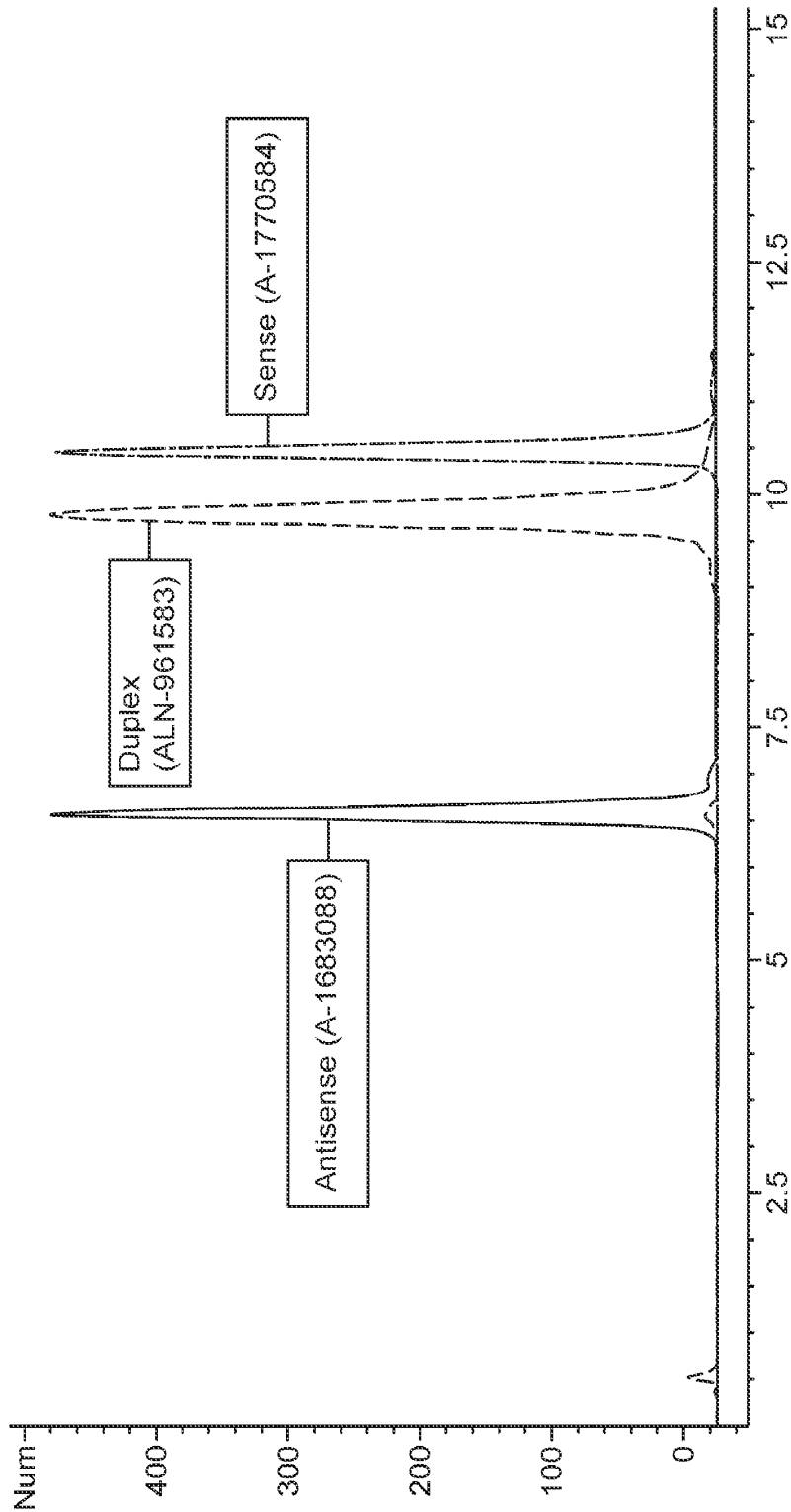


FIG. 10A

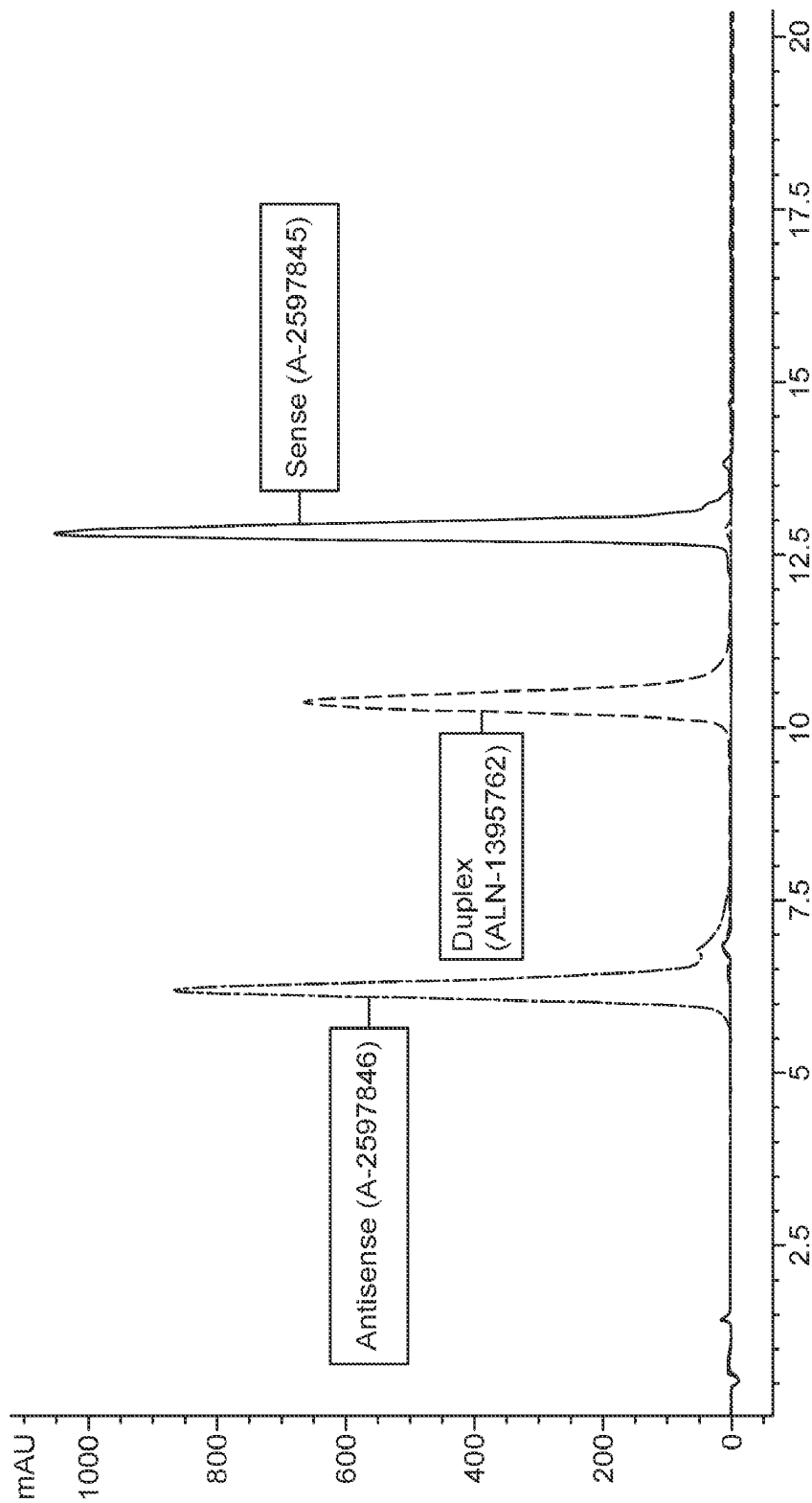


FIG. 10B

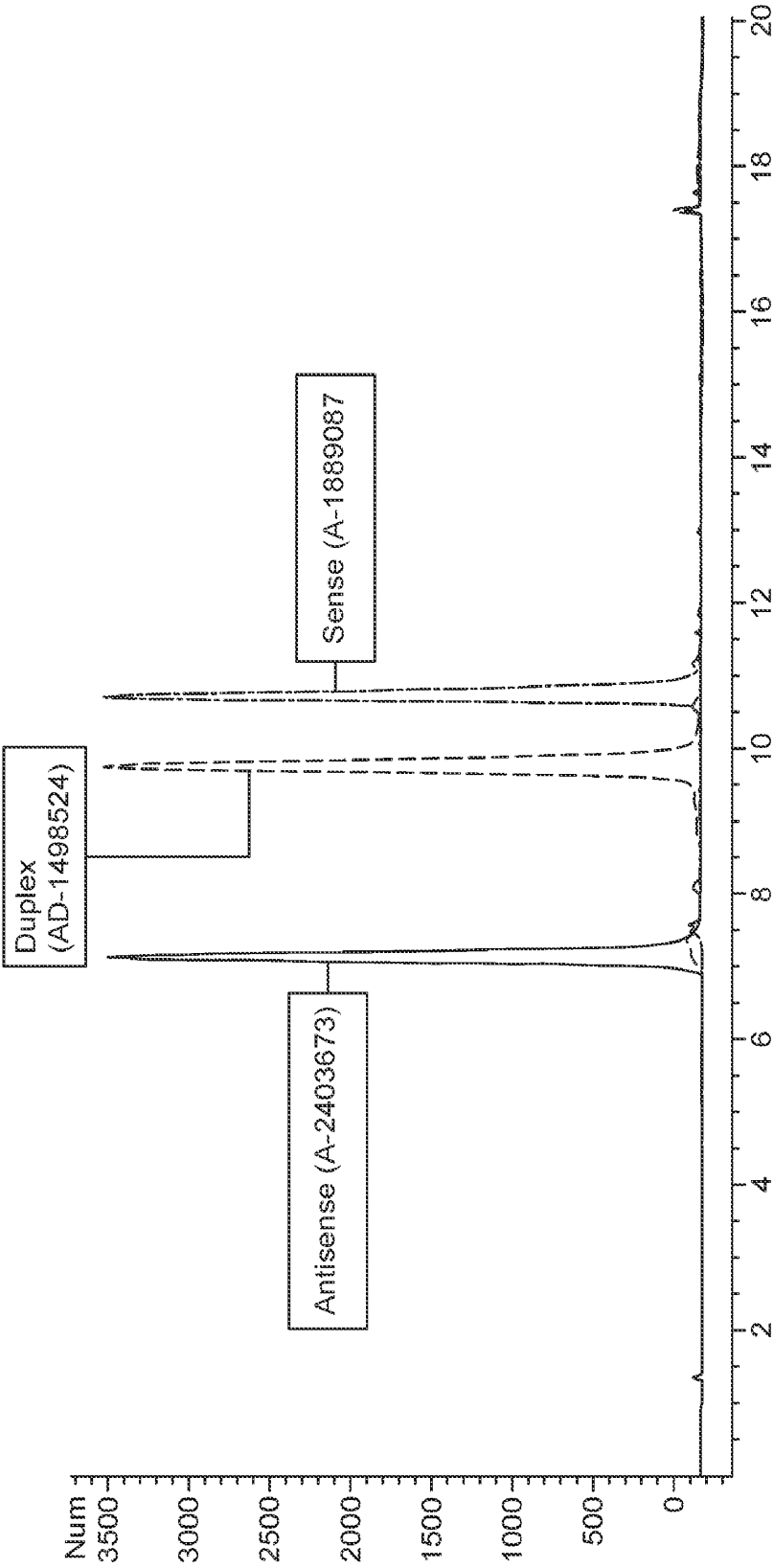
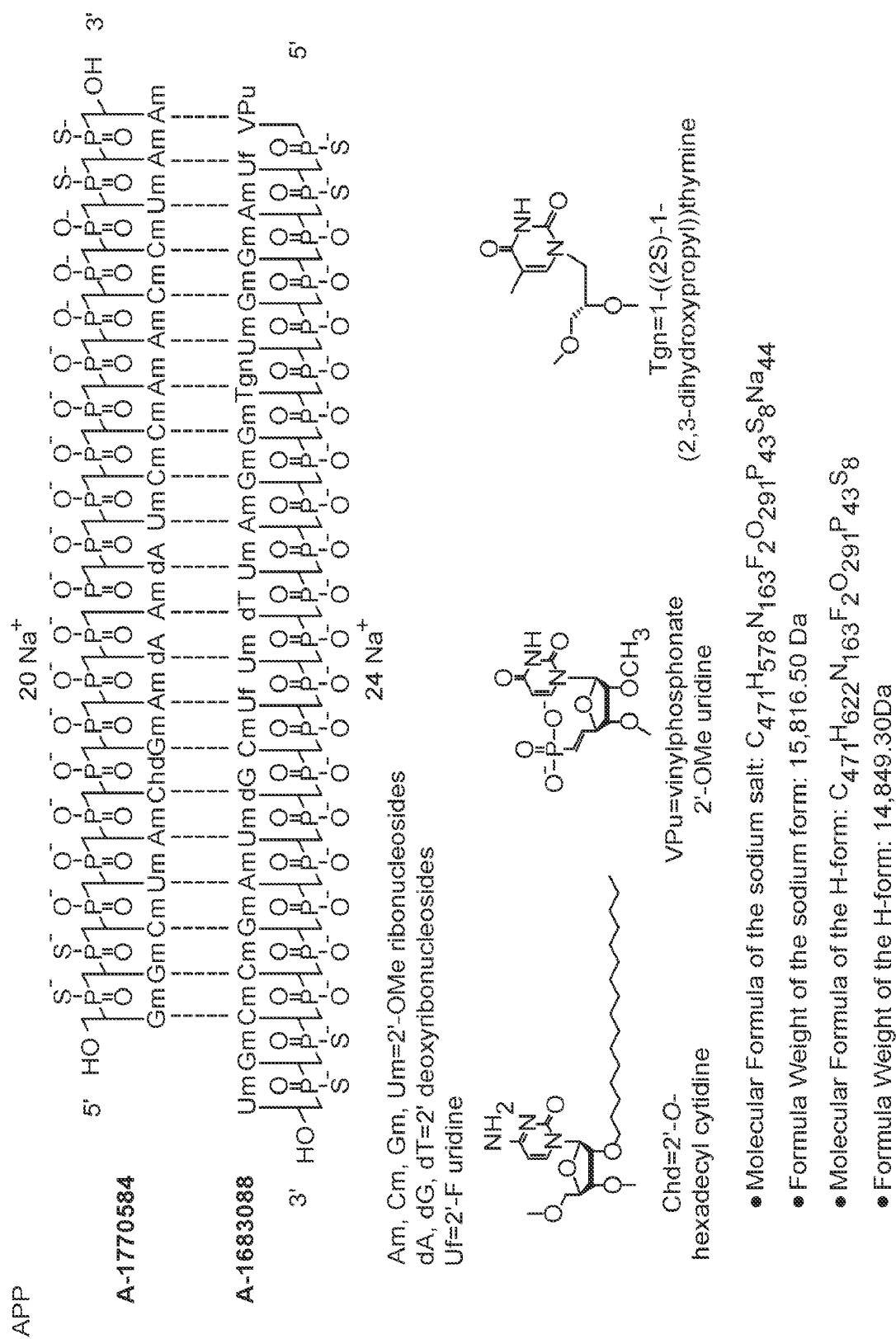
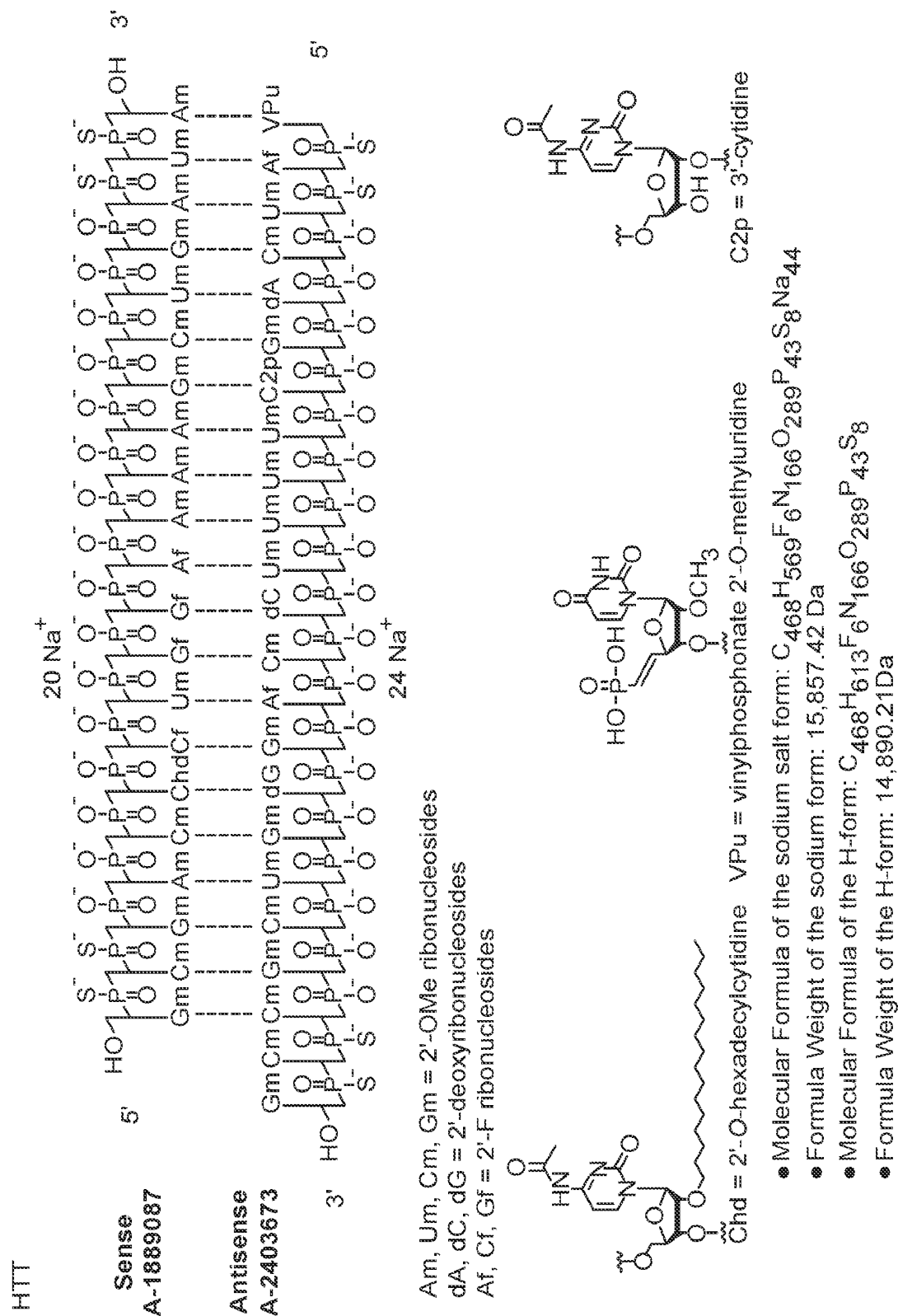


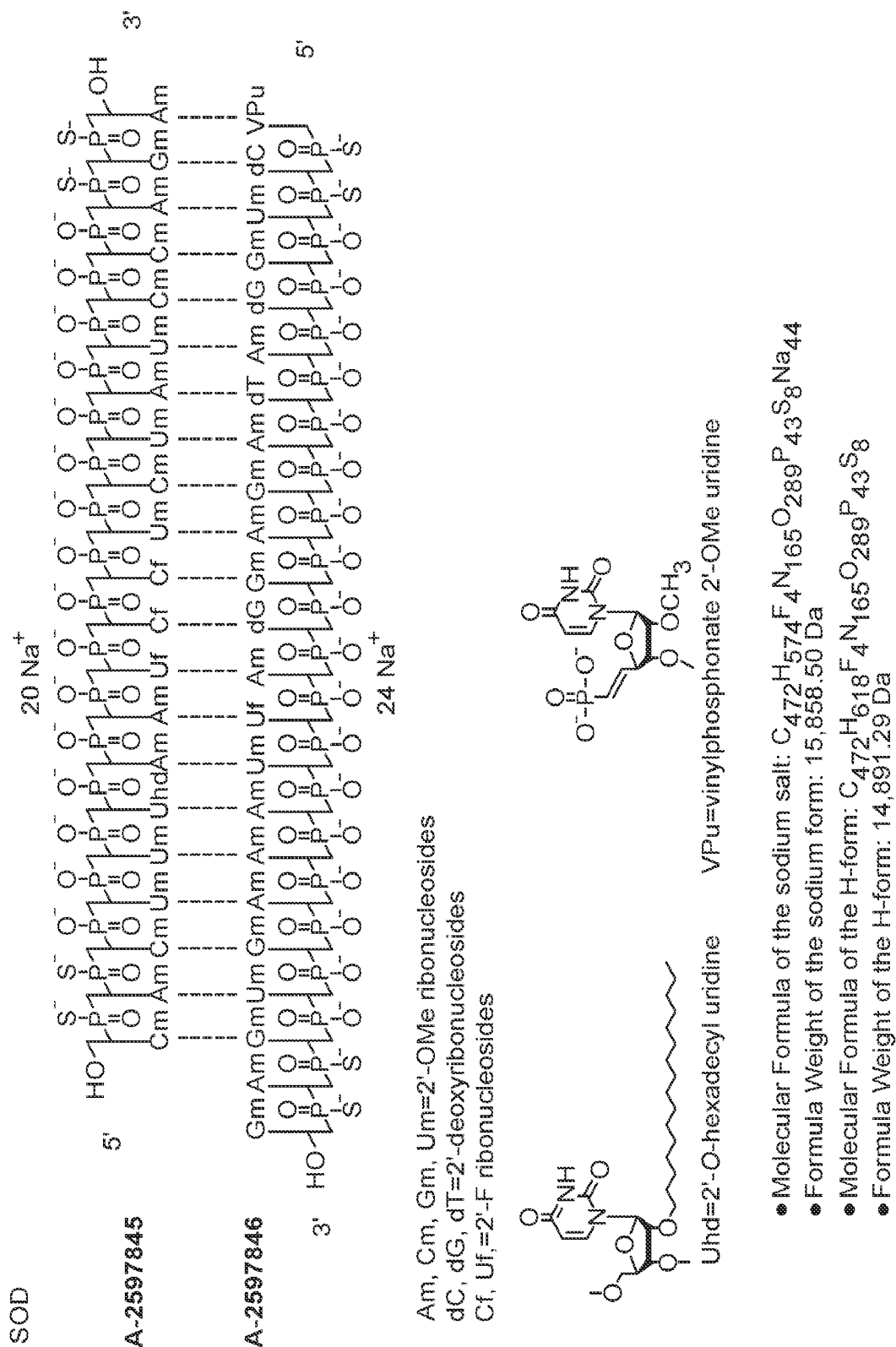
FIG. 10C



ALICE



22/22



1996