

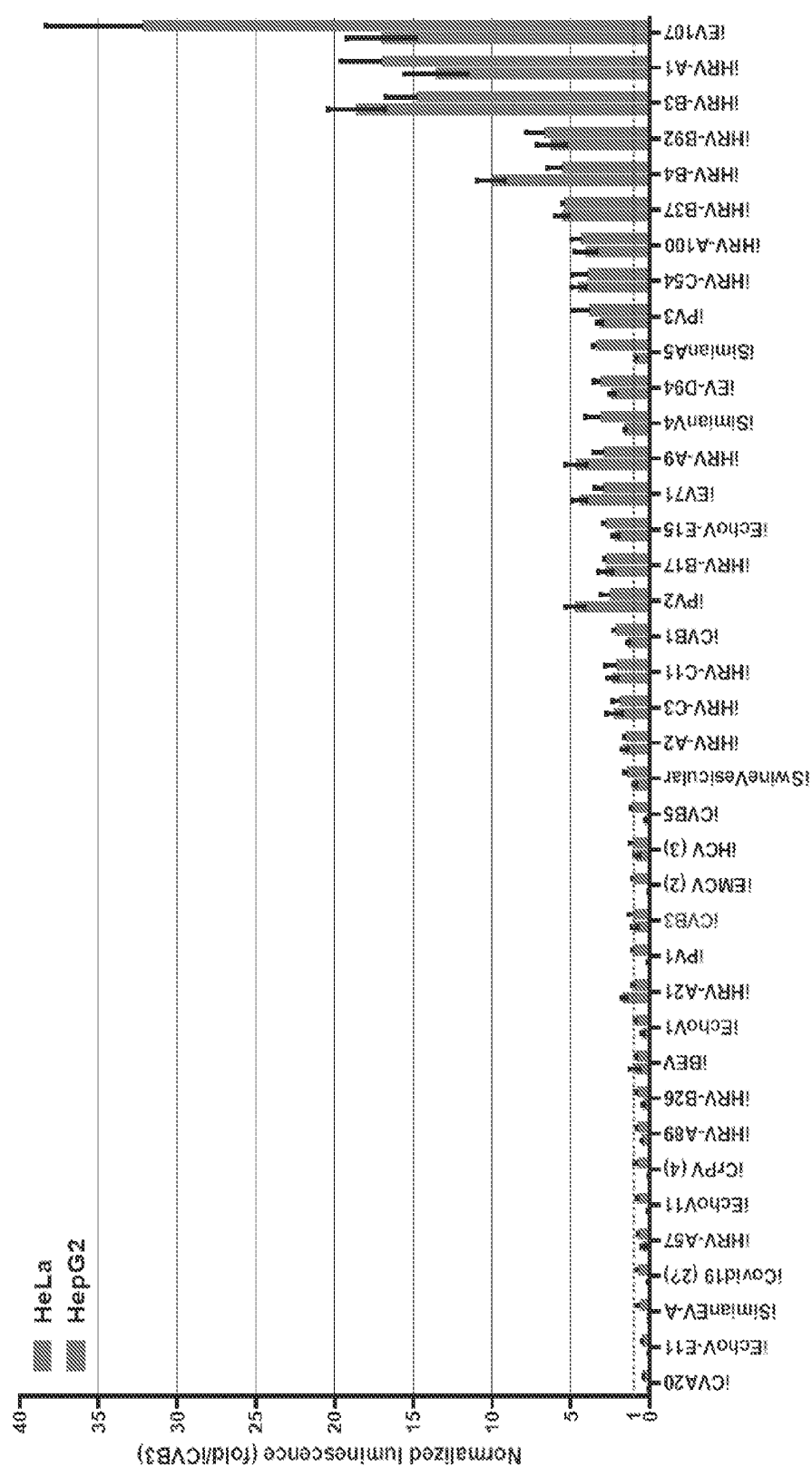


FIG. 1

FIG. 2

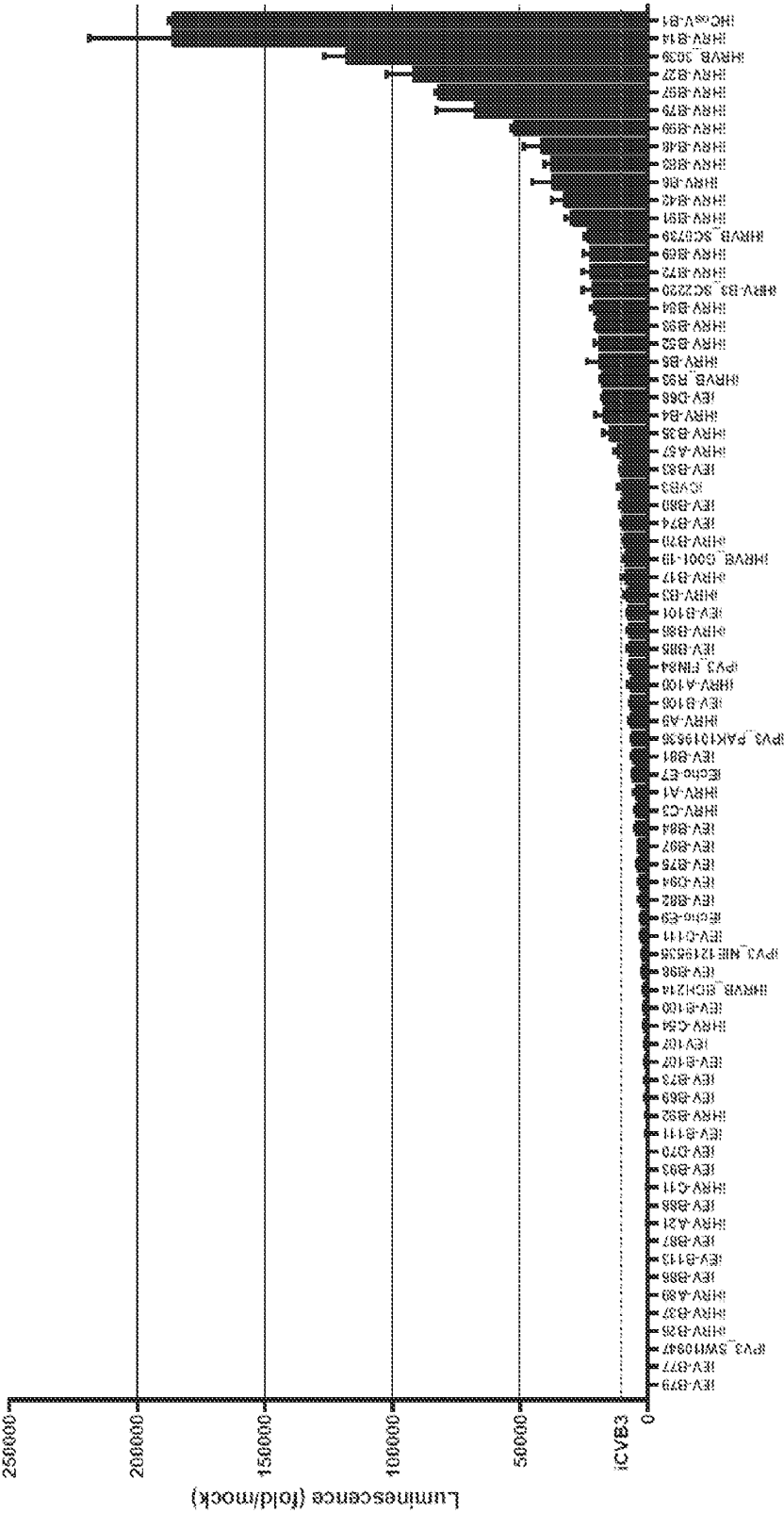


FIG. 3

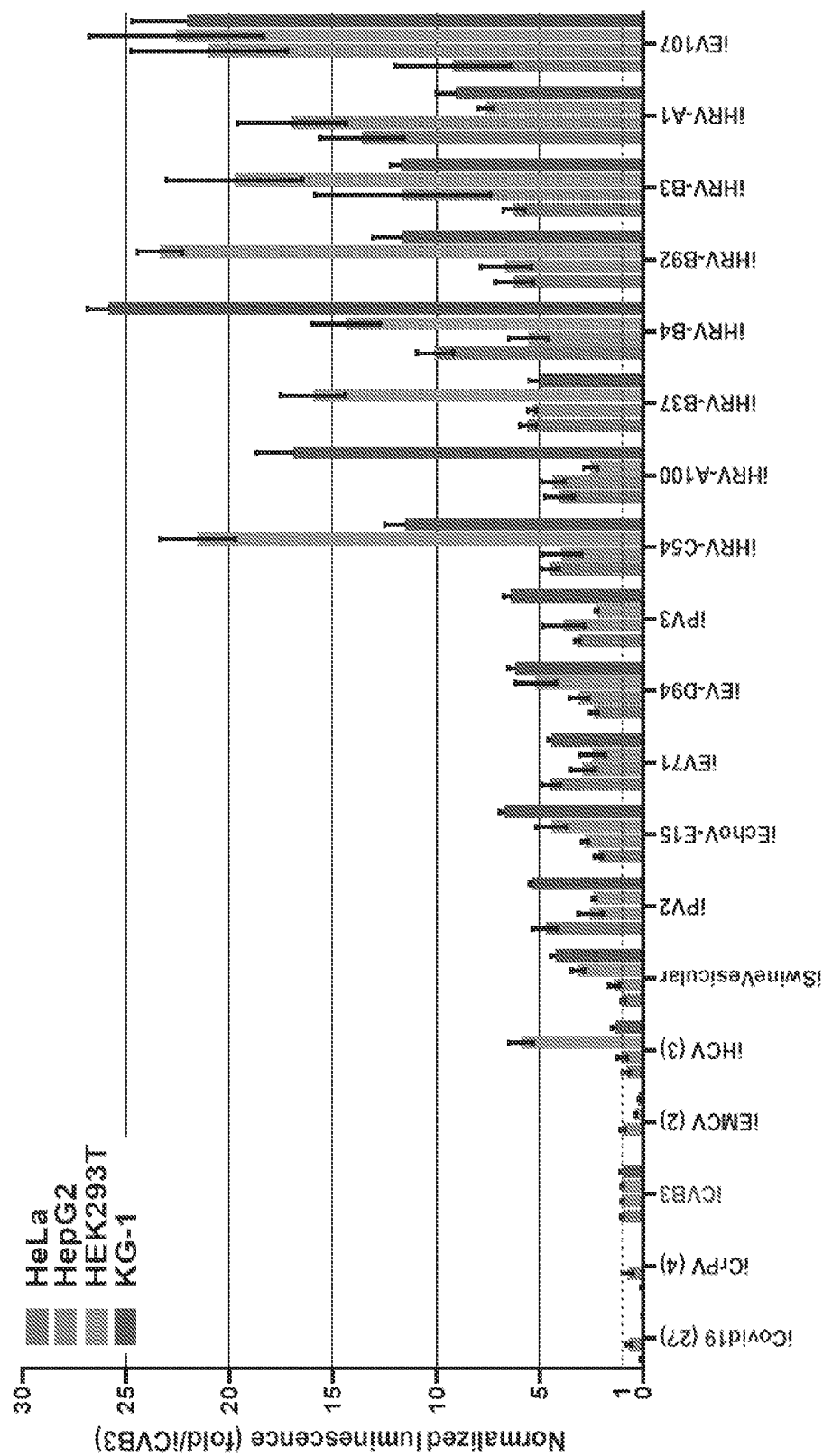
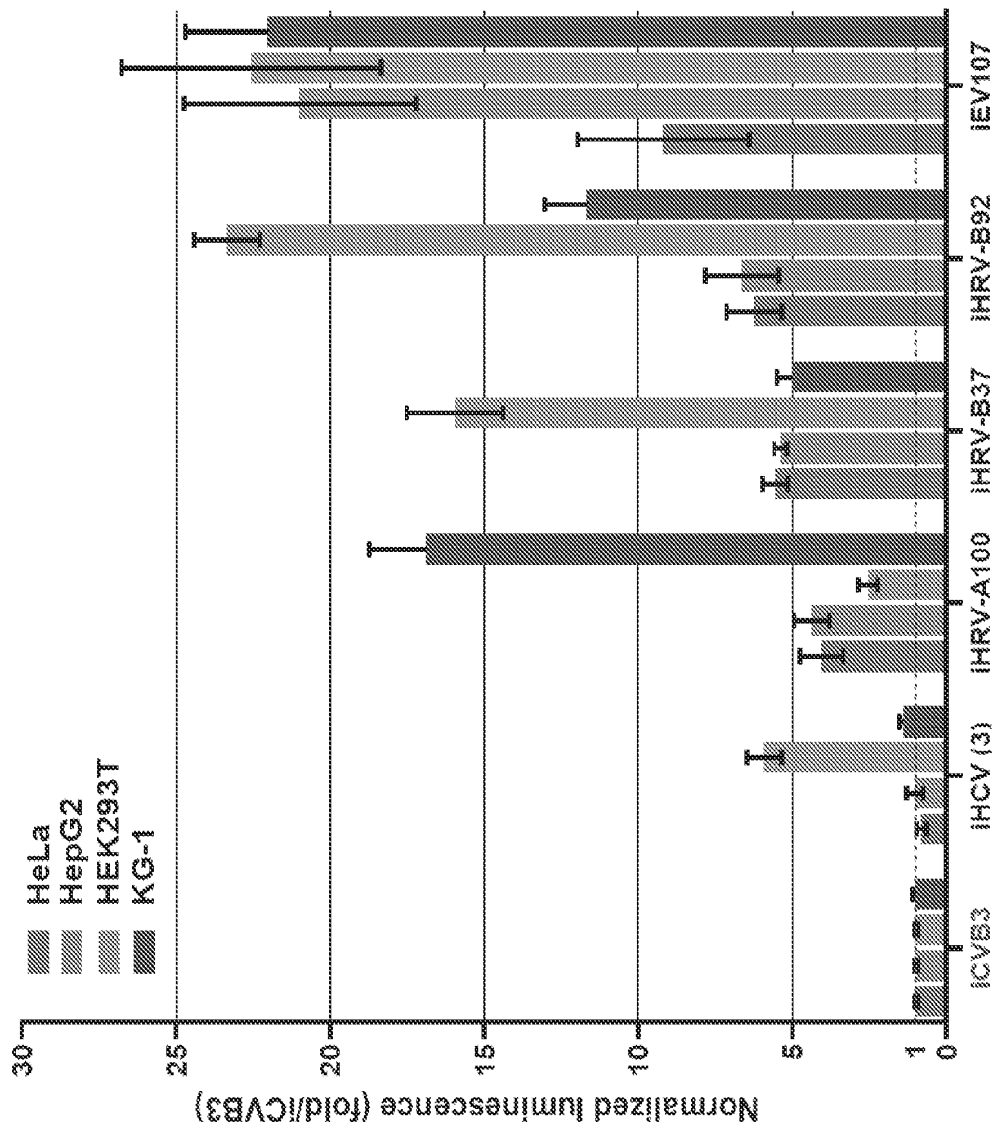


FIG. 4



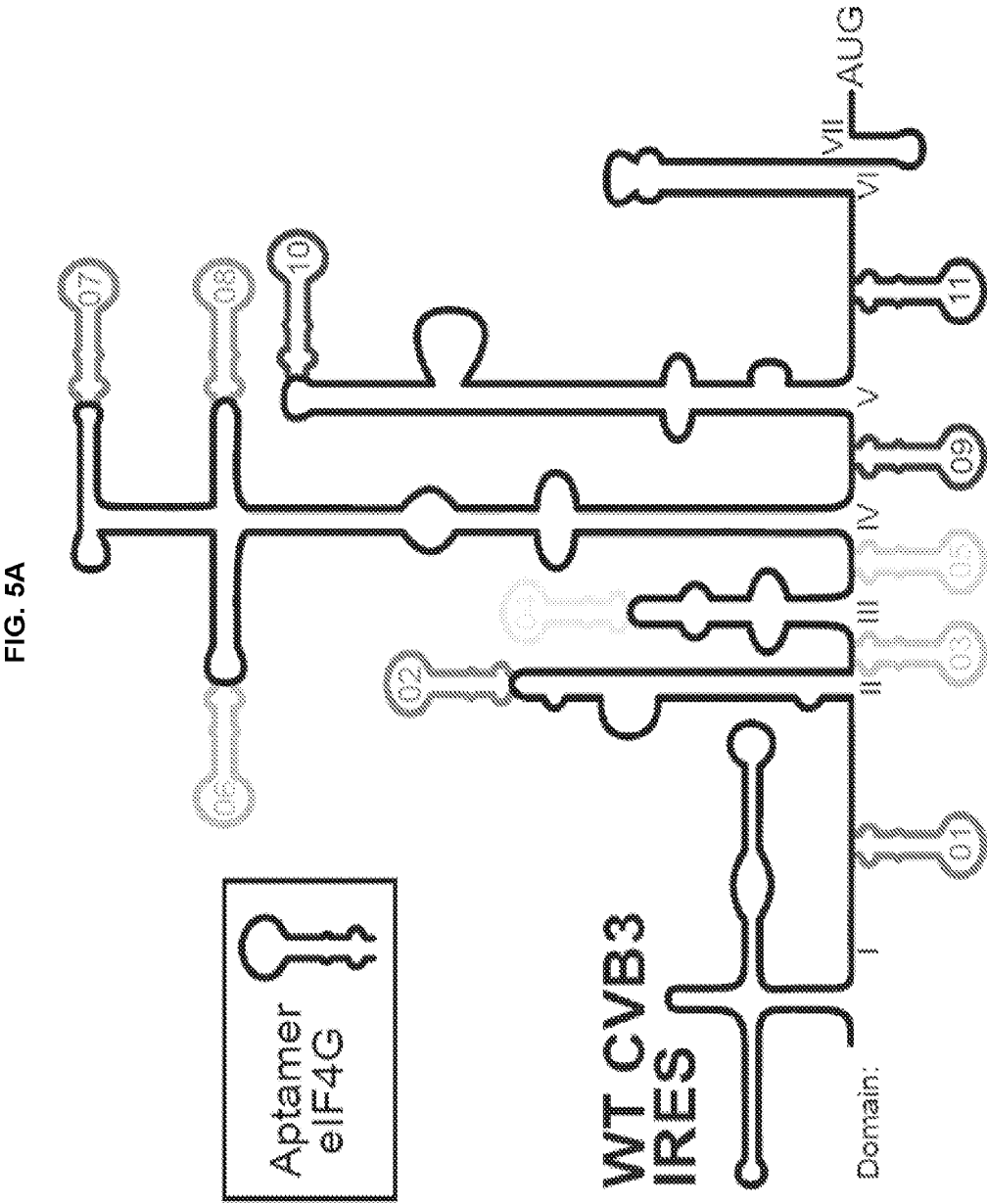


FIG. 5B

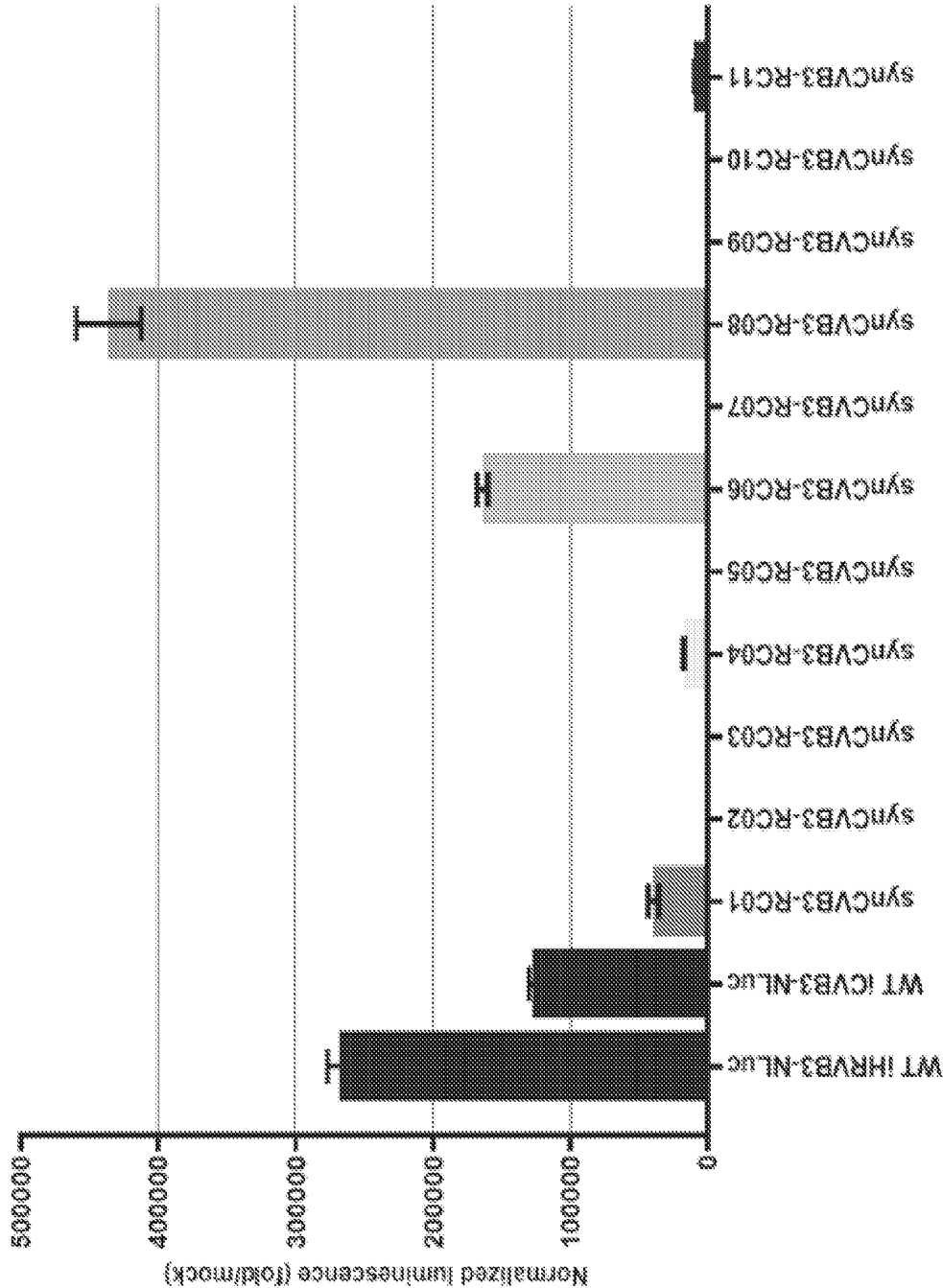


FIG. 6A

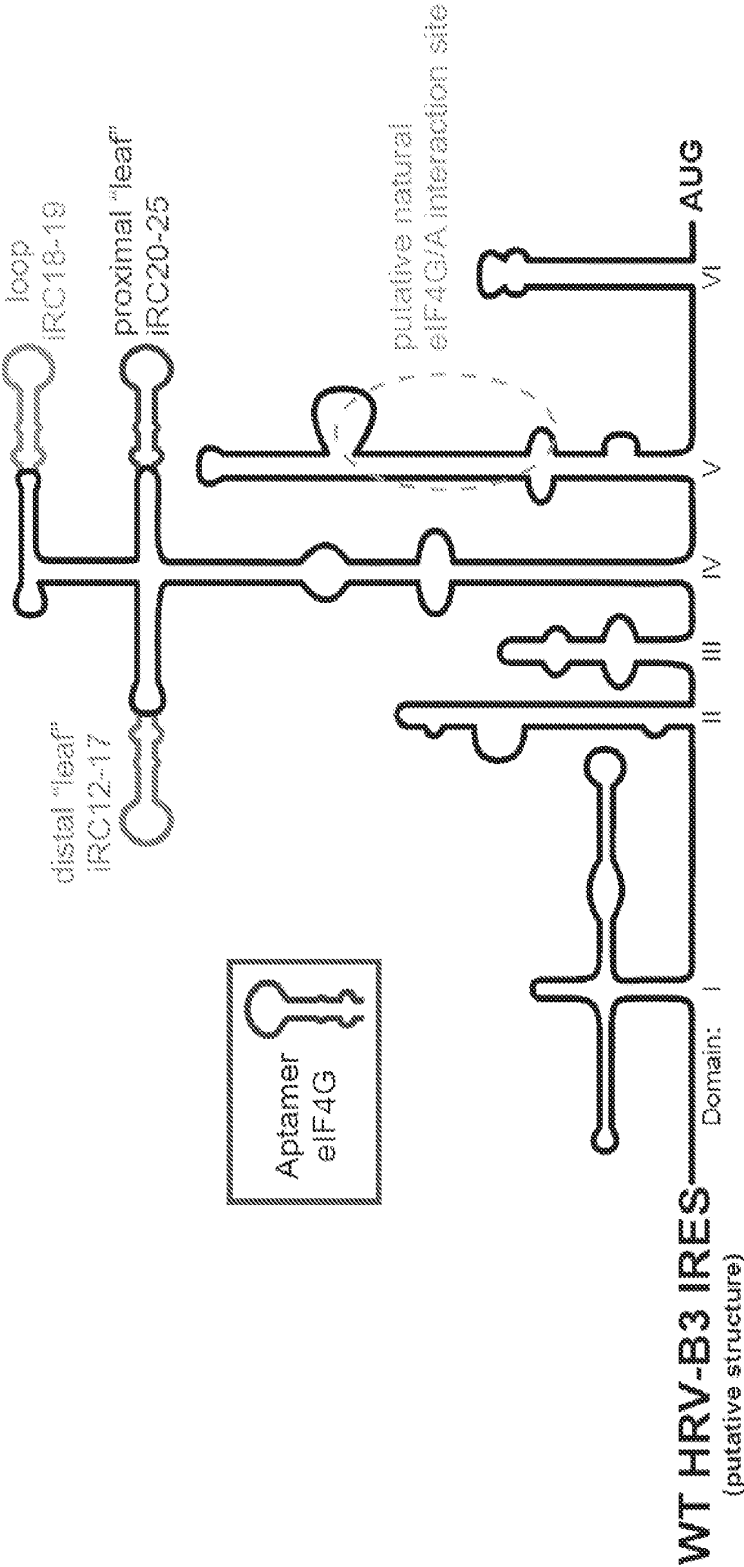


FIG. 6B

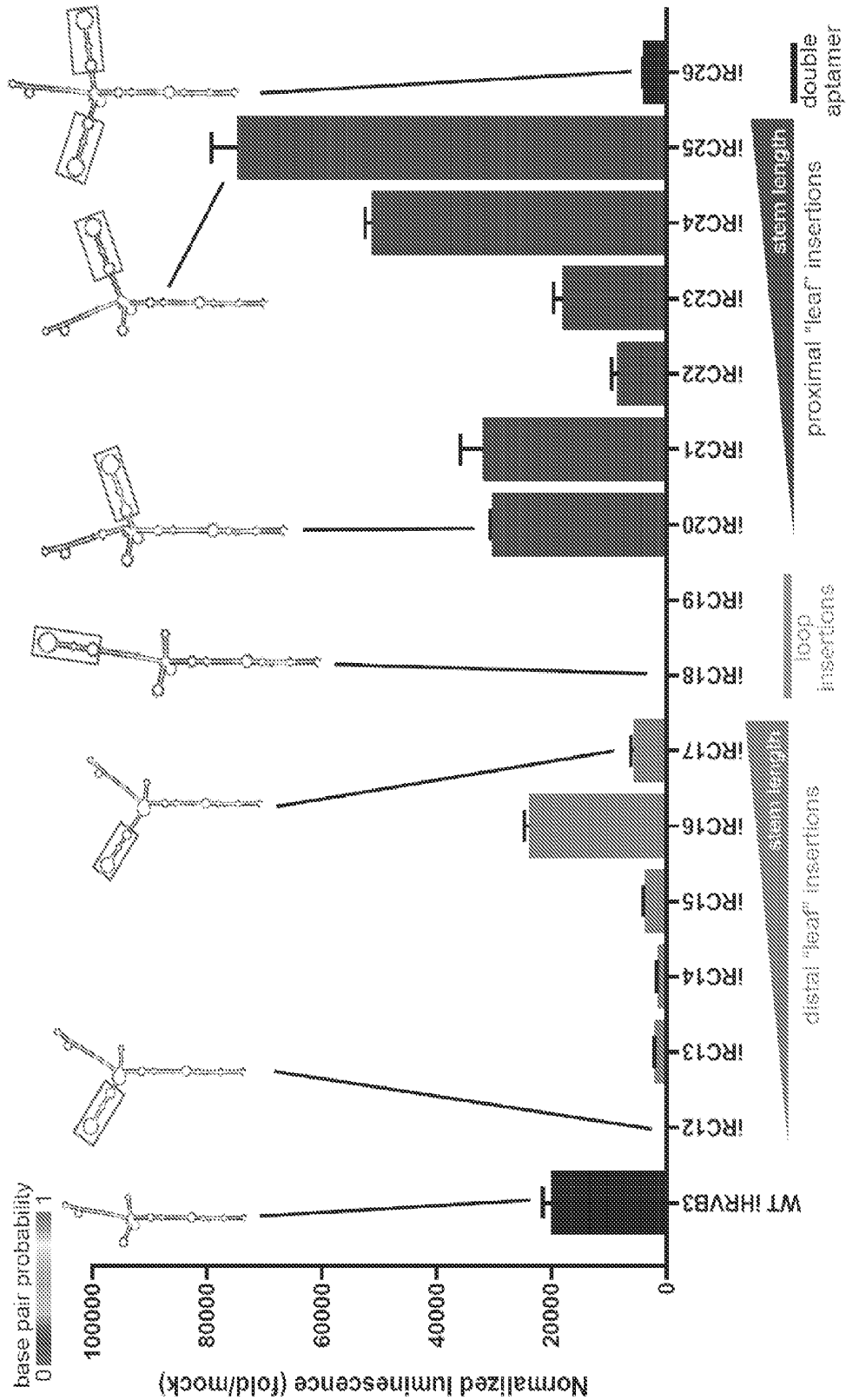


FIG. 7A

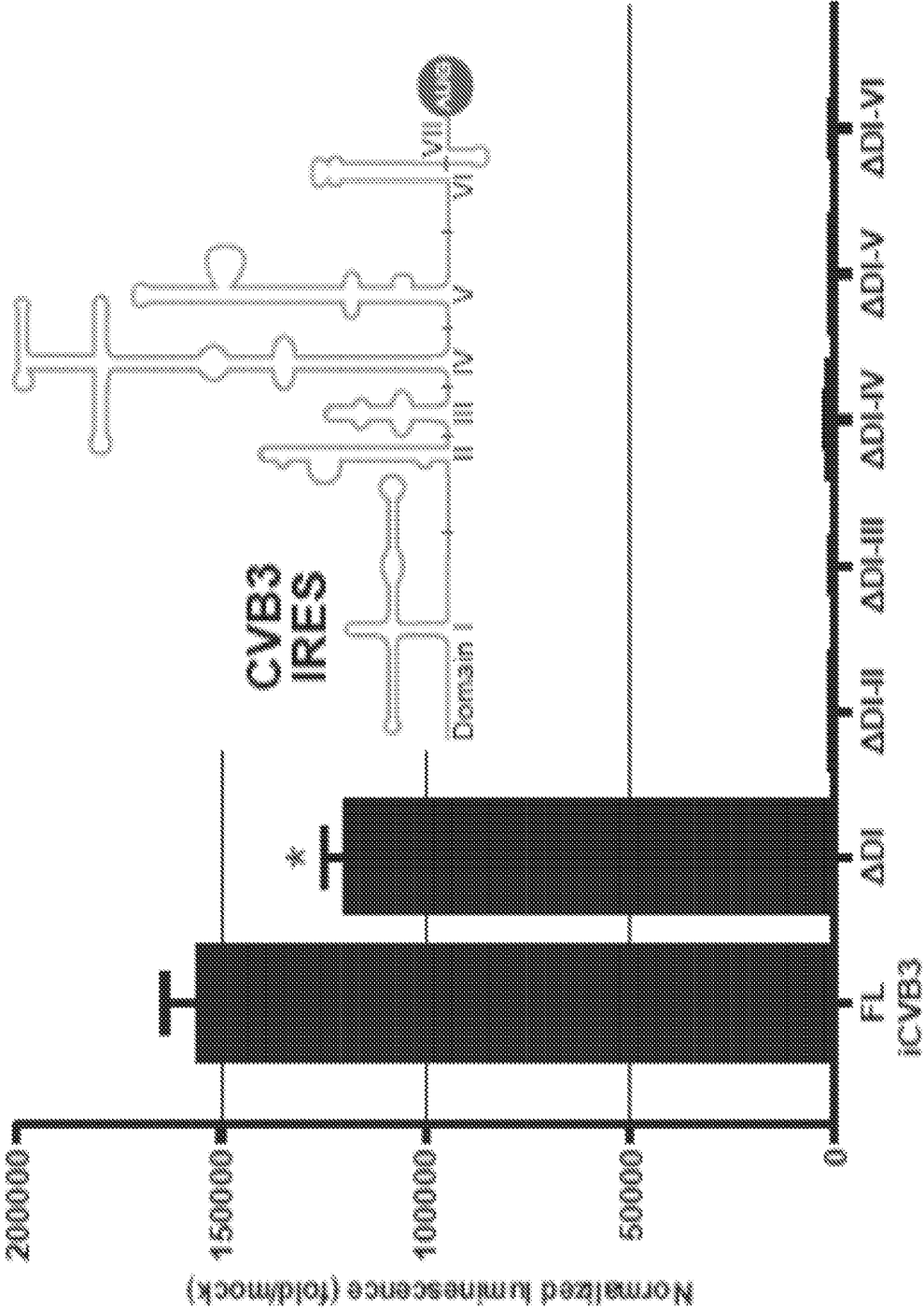


FIG. 7B

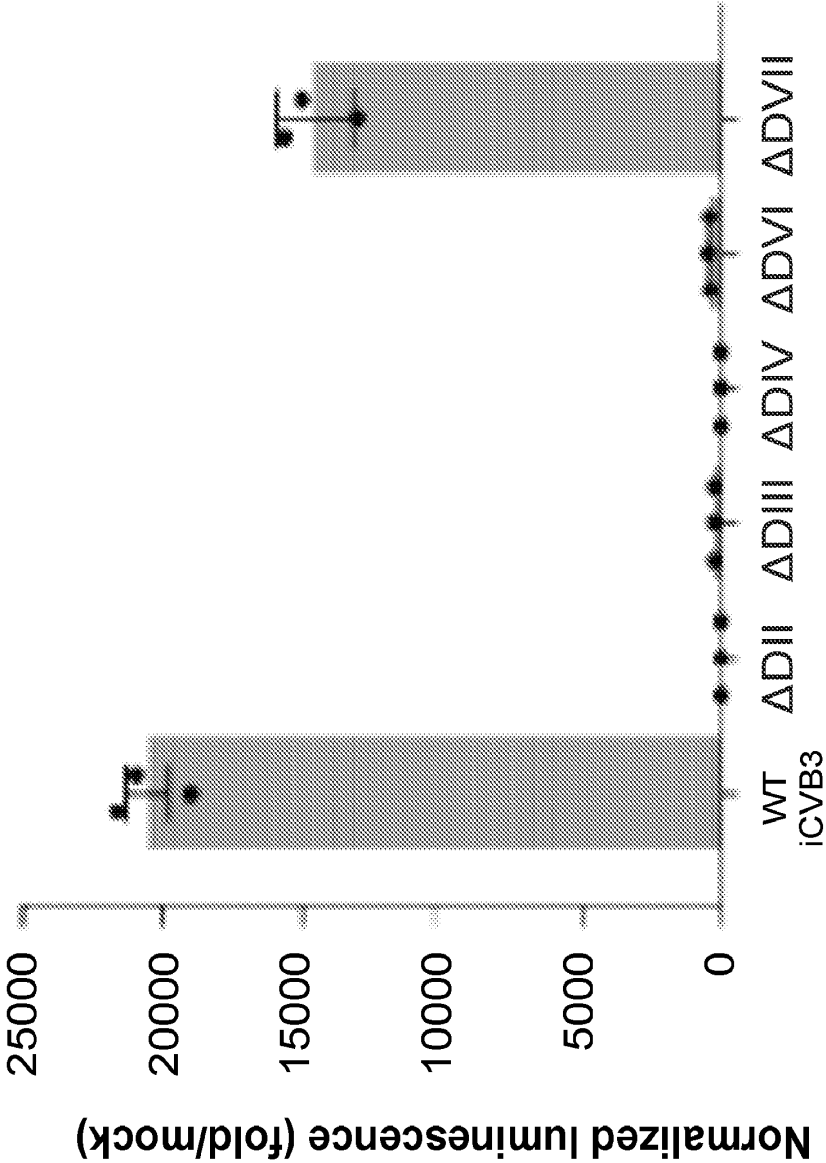


FIG. 7C

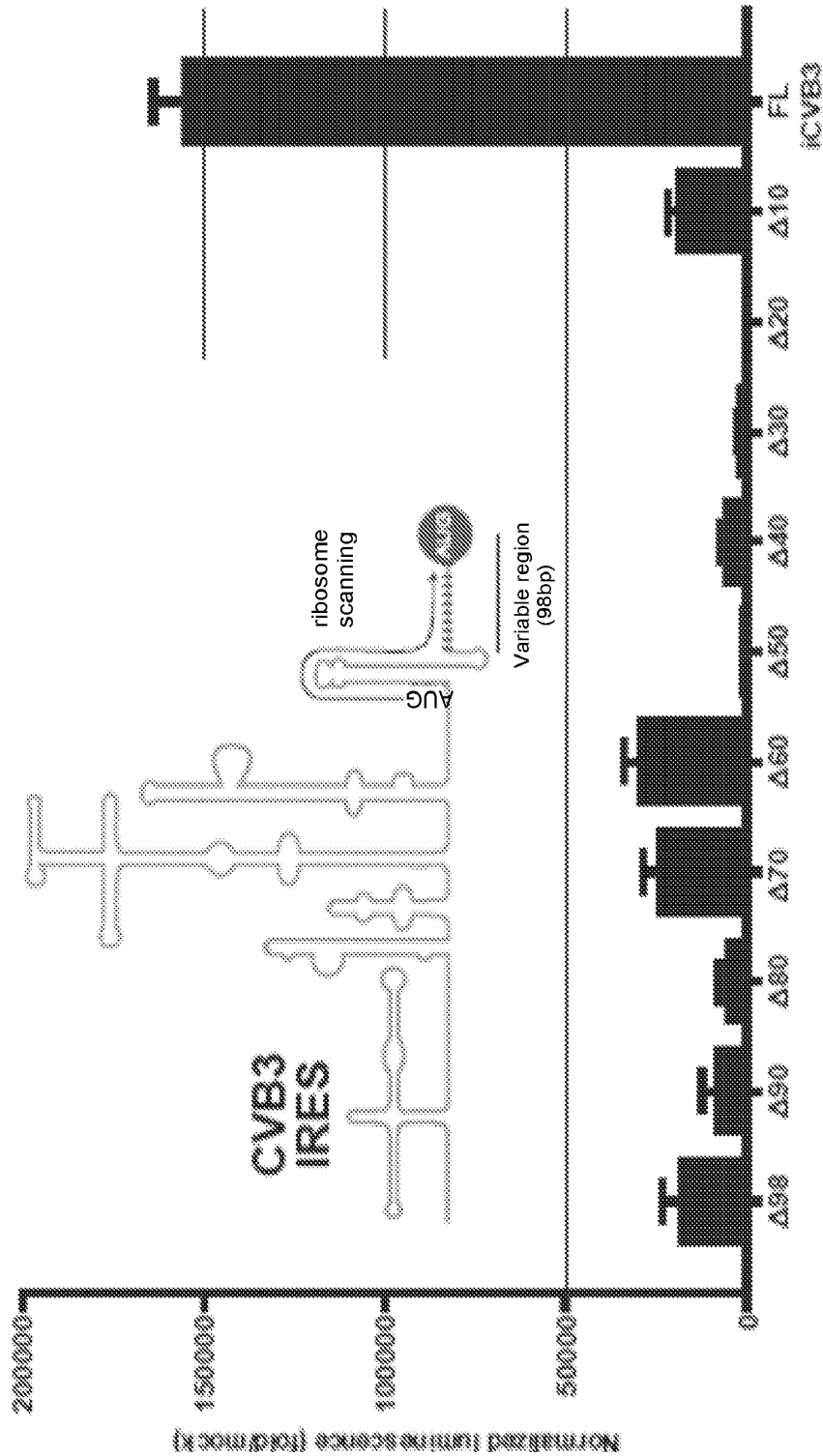


FIG. 7D

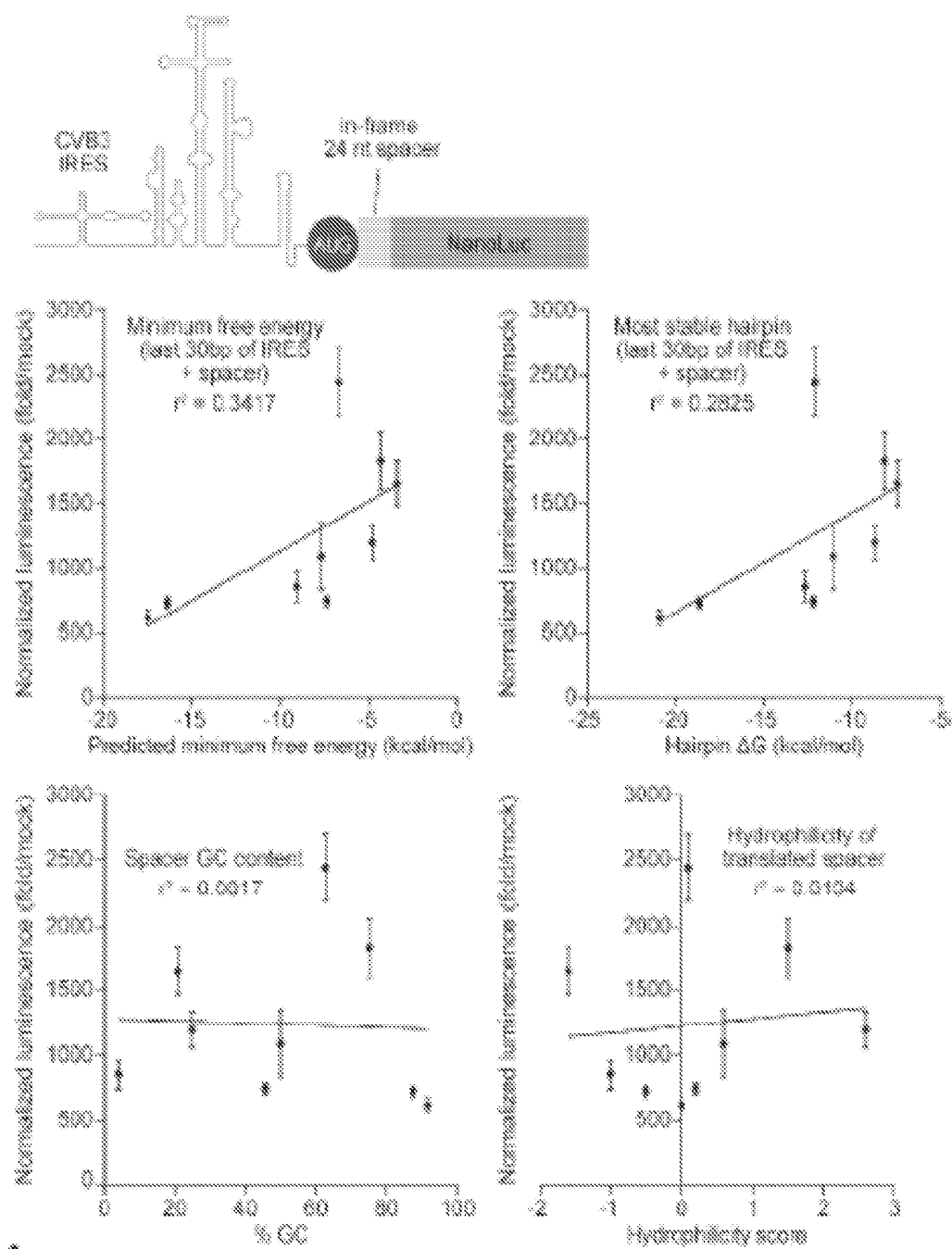


FIG. 8

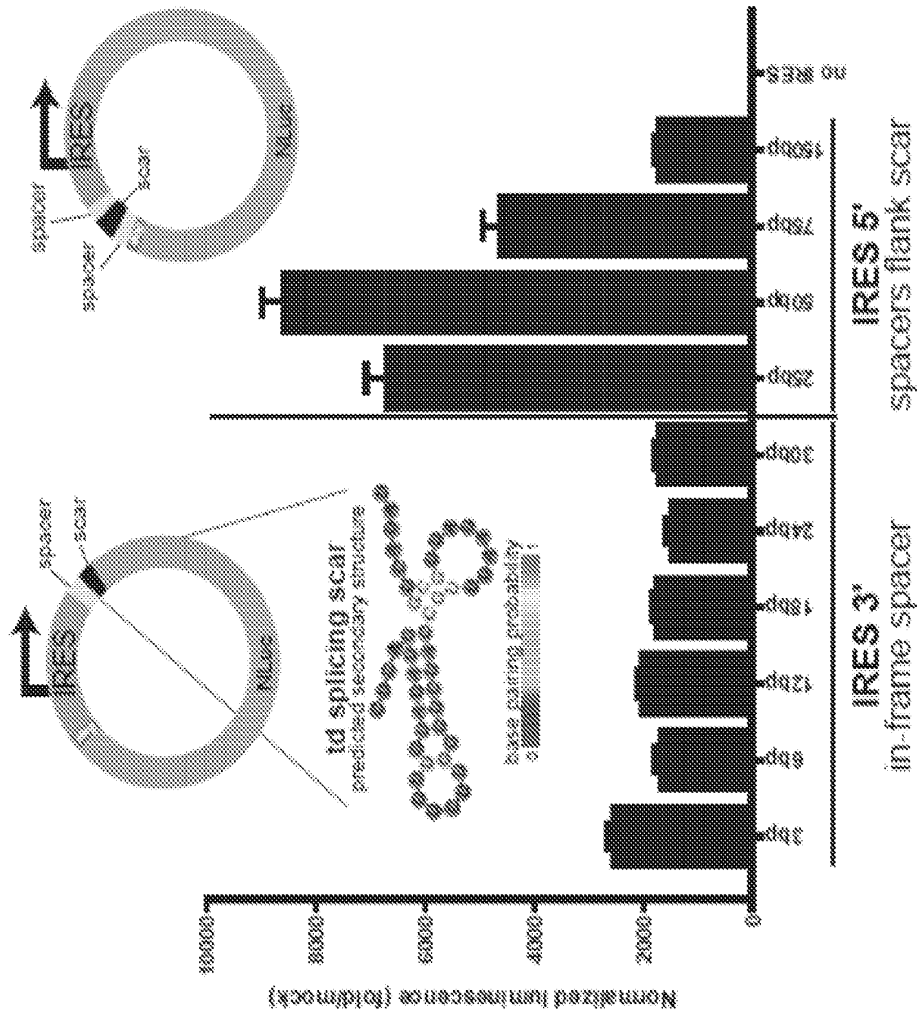


FIG. 9

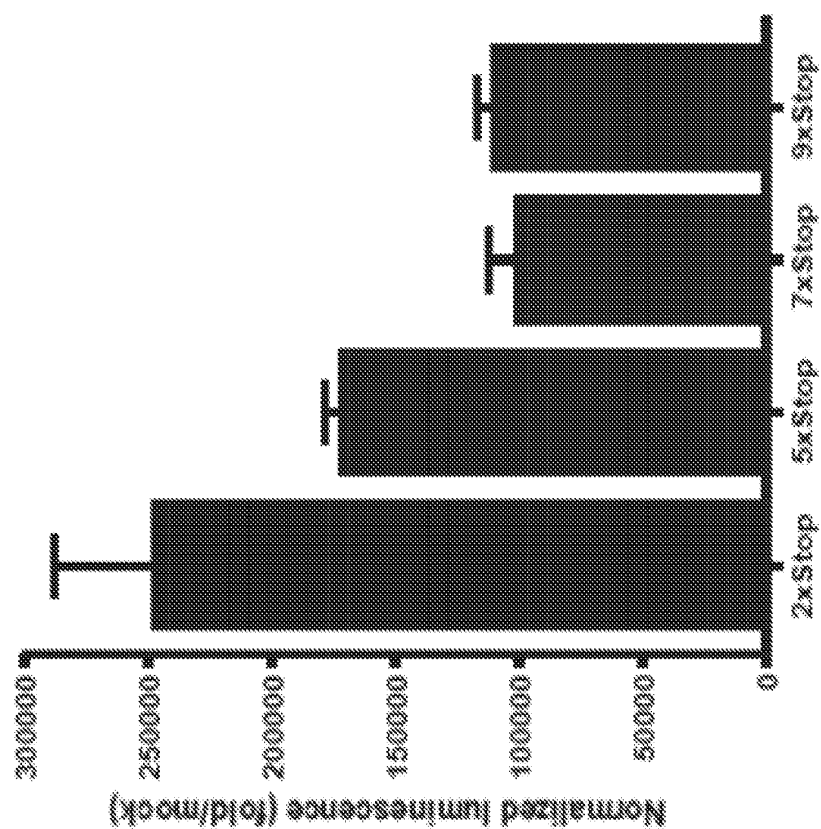


FIG. 10A

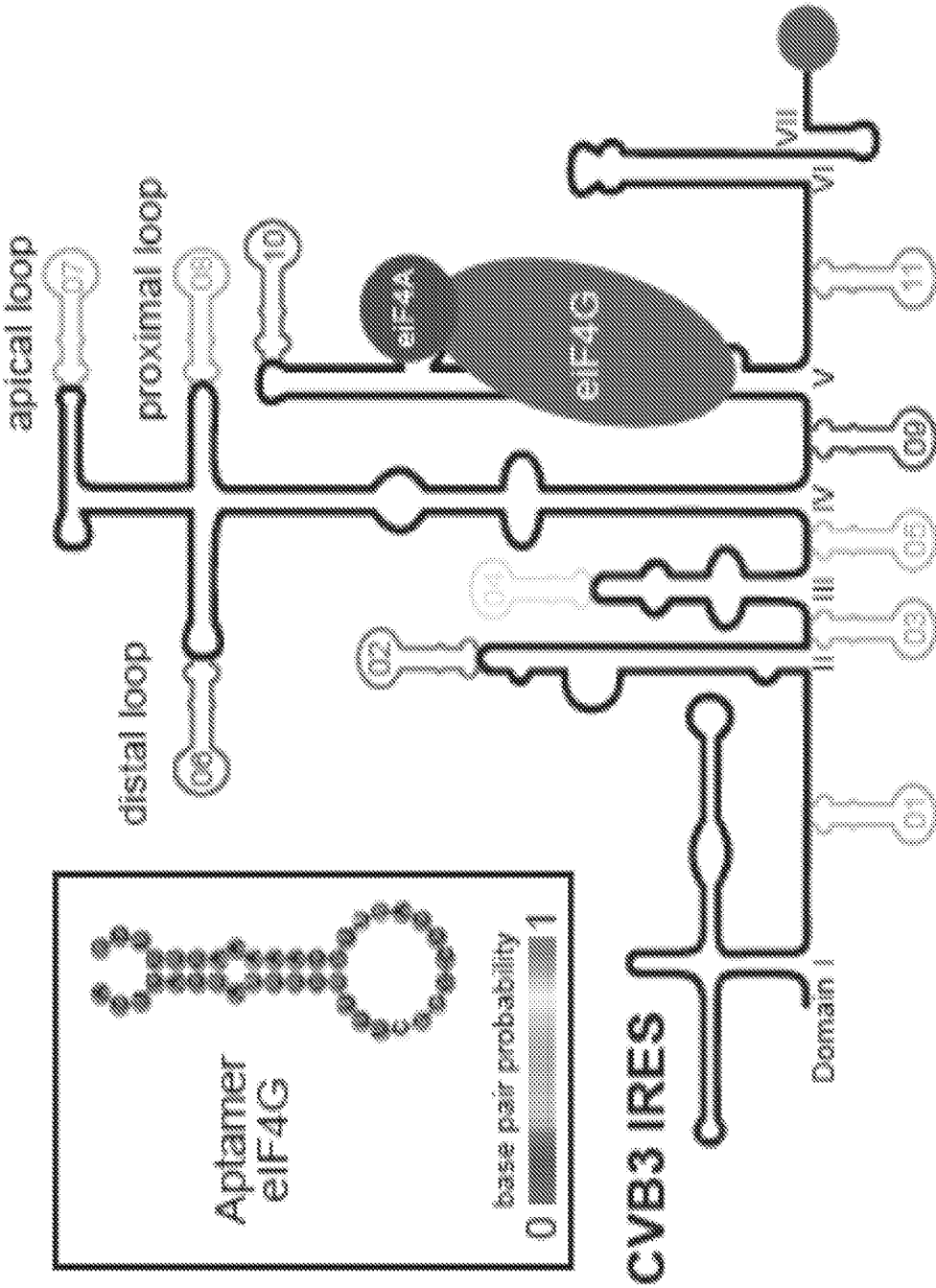


FIG. 10A (Cont.)

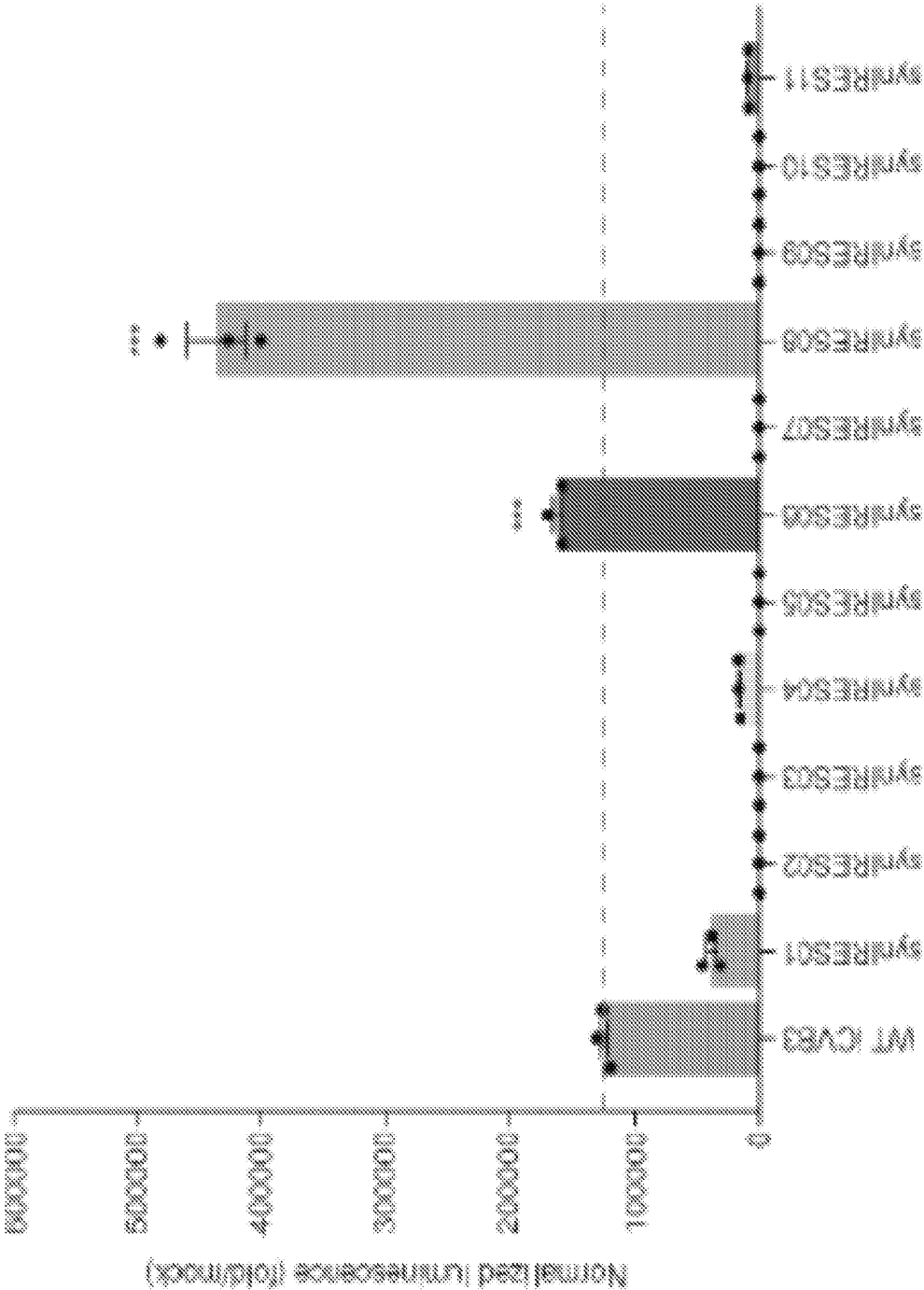


FIG. 10B

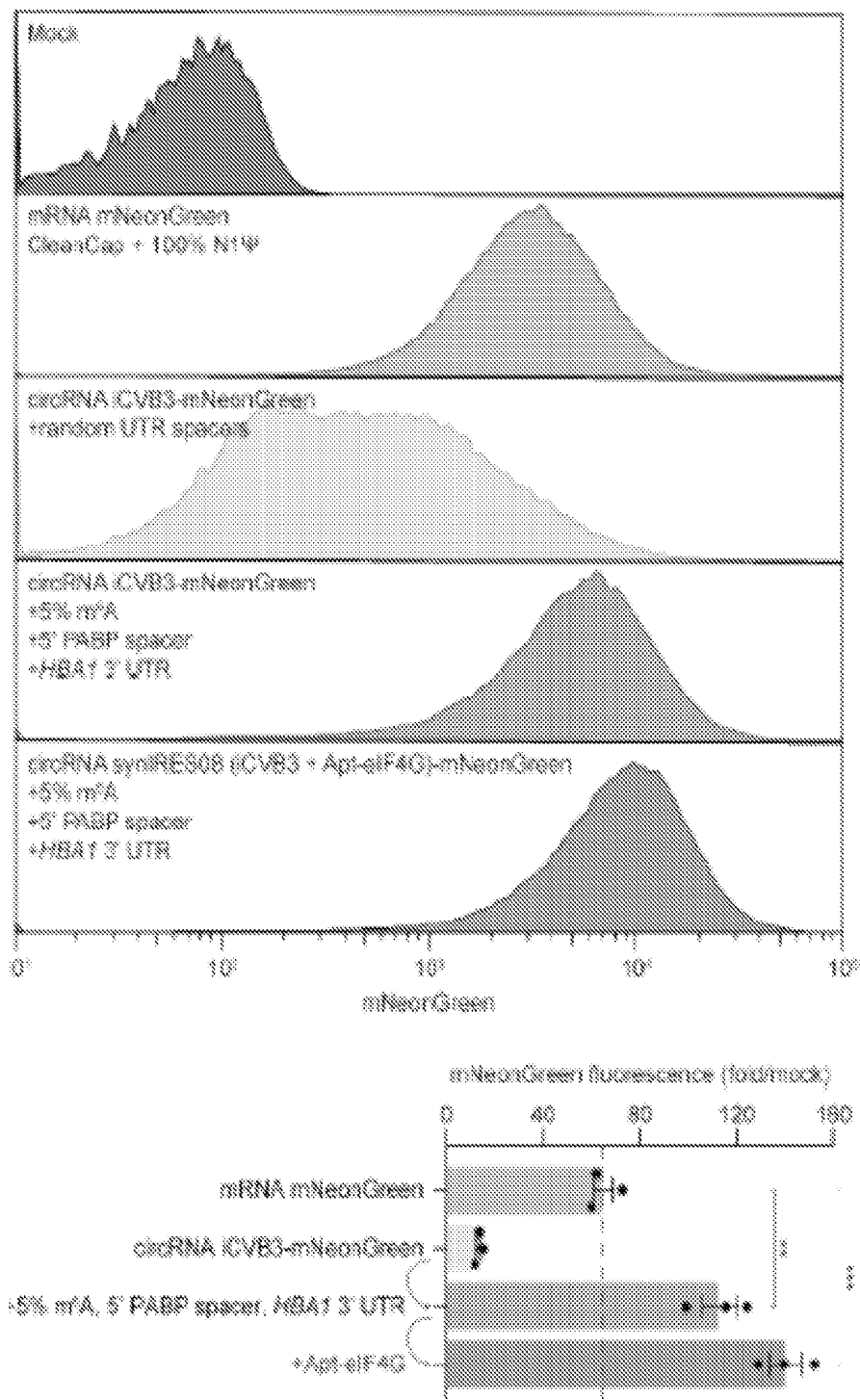


FIG. 10C

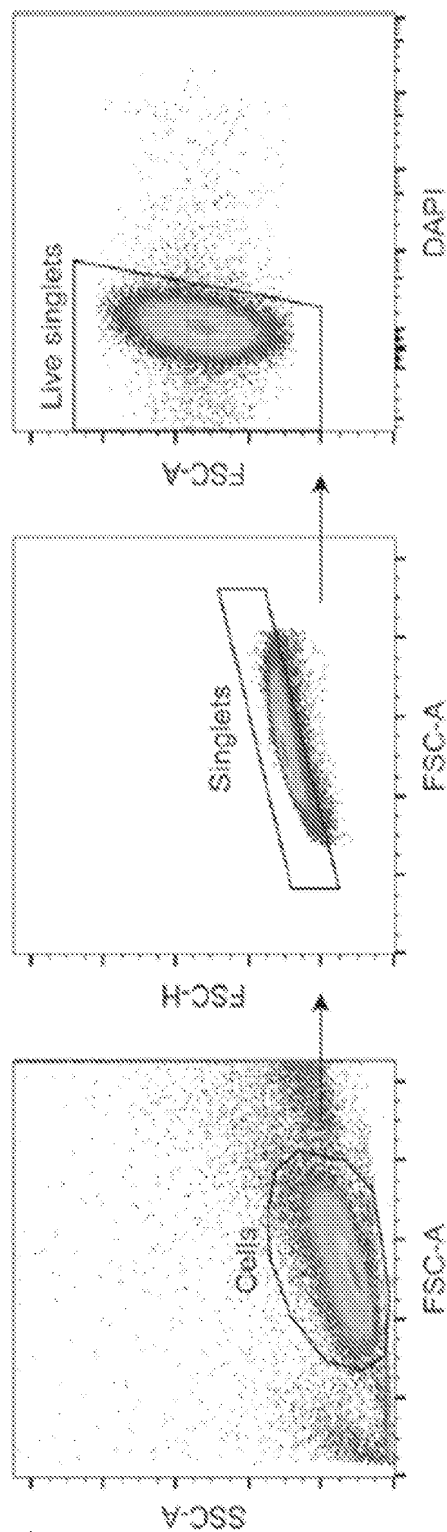


FIG. 11

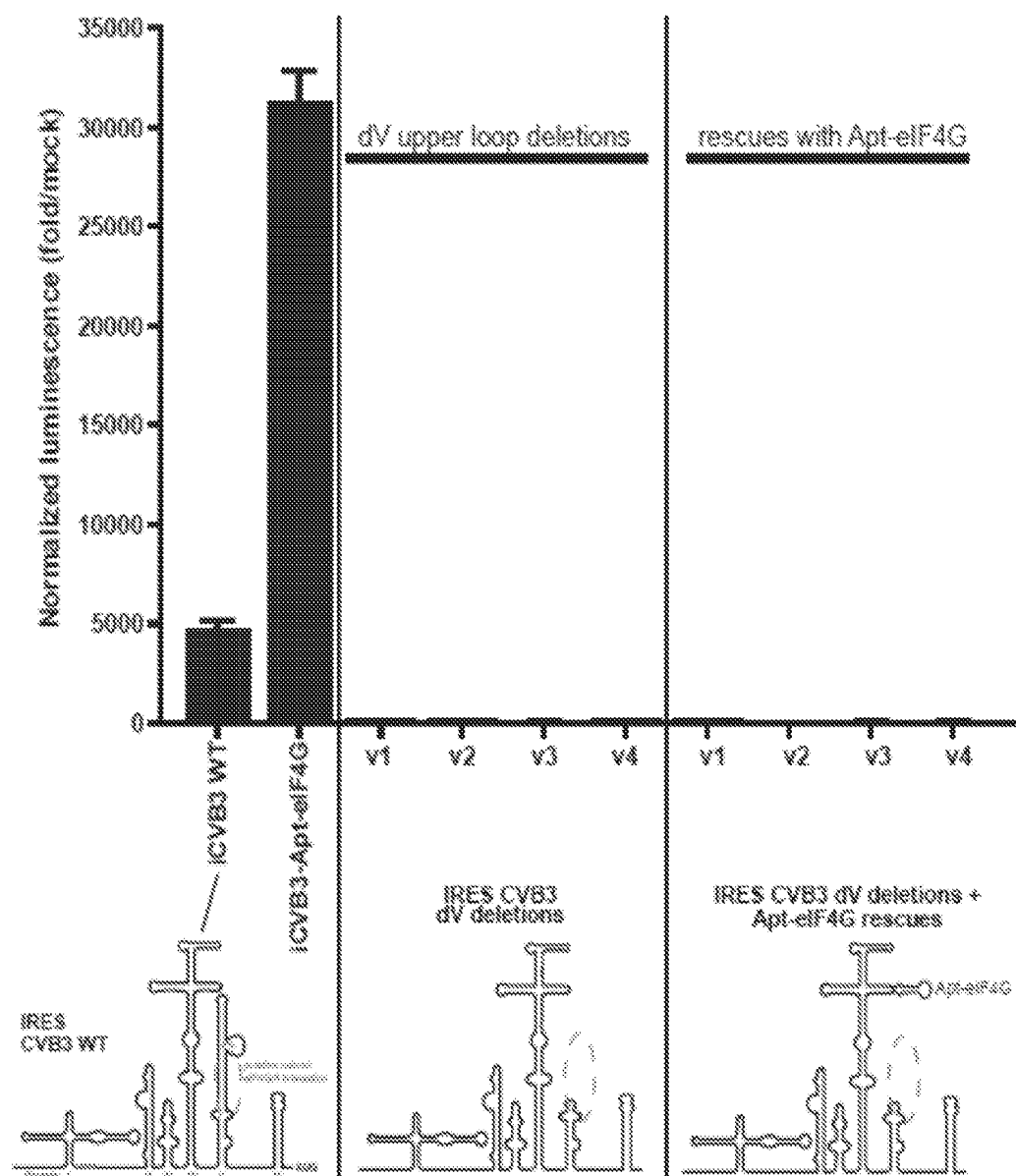


FIG. 12A

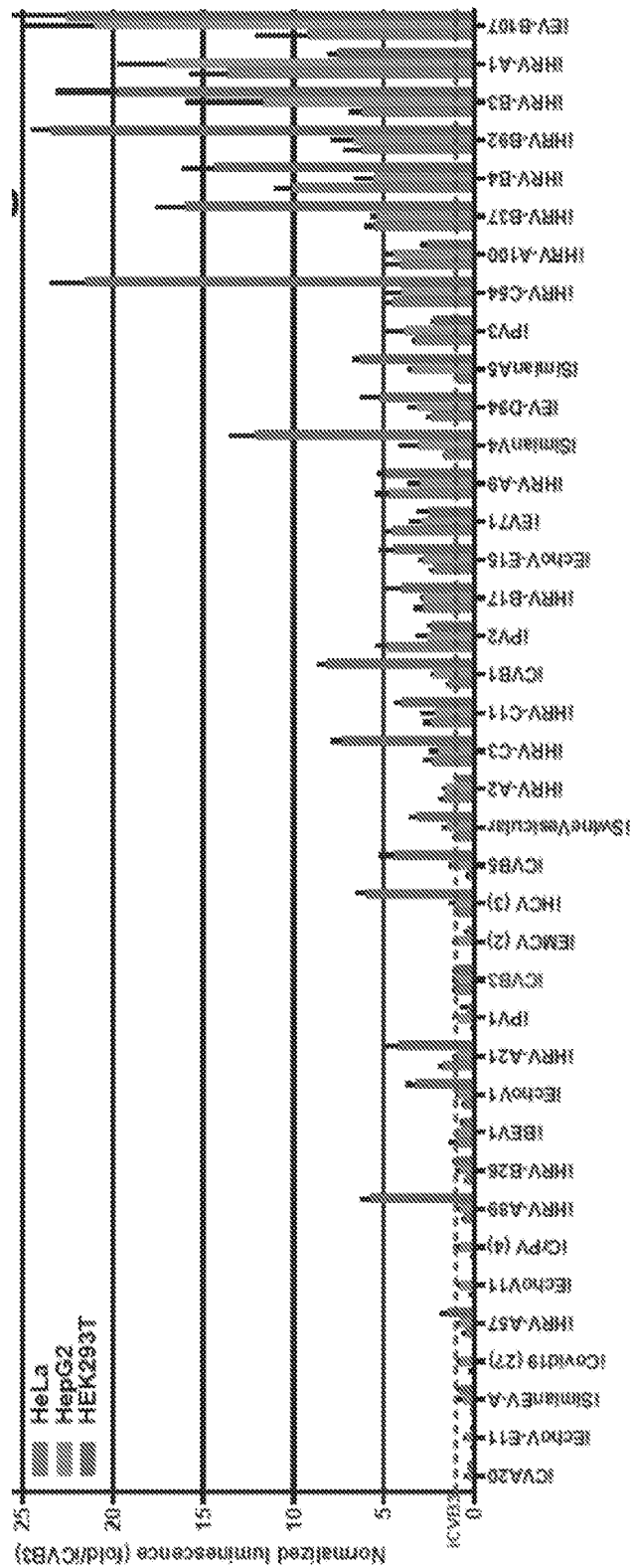
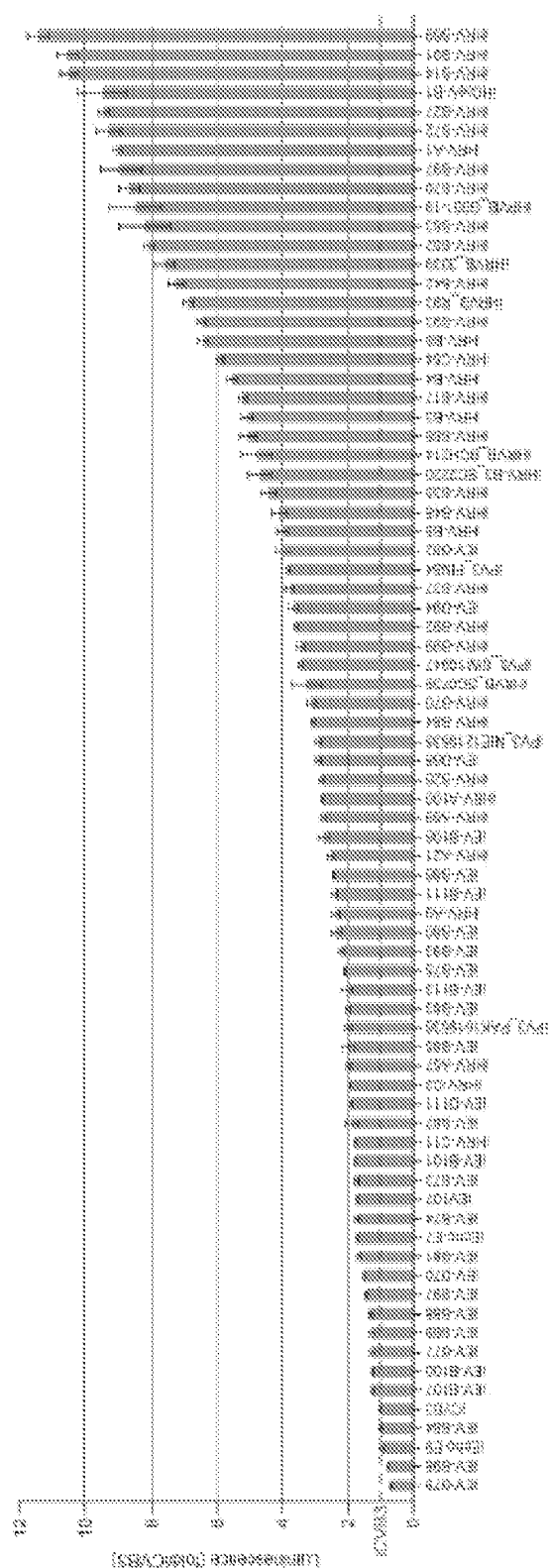


FIG. 13A



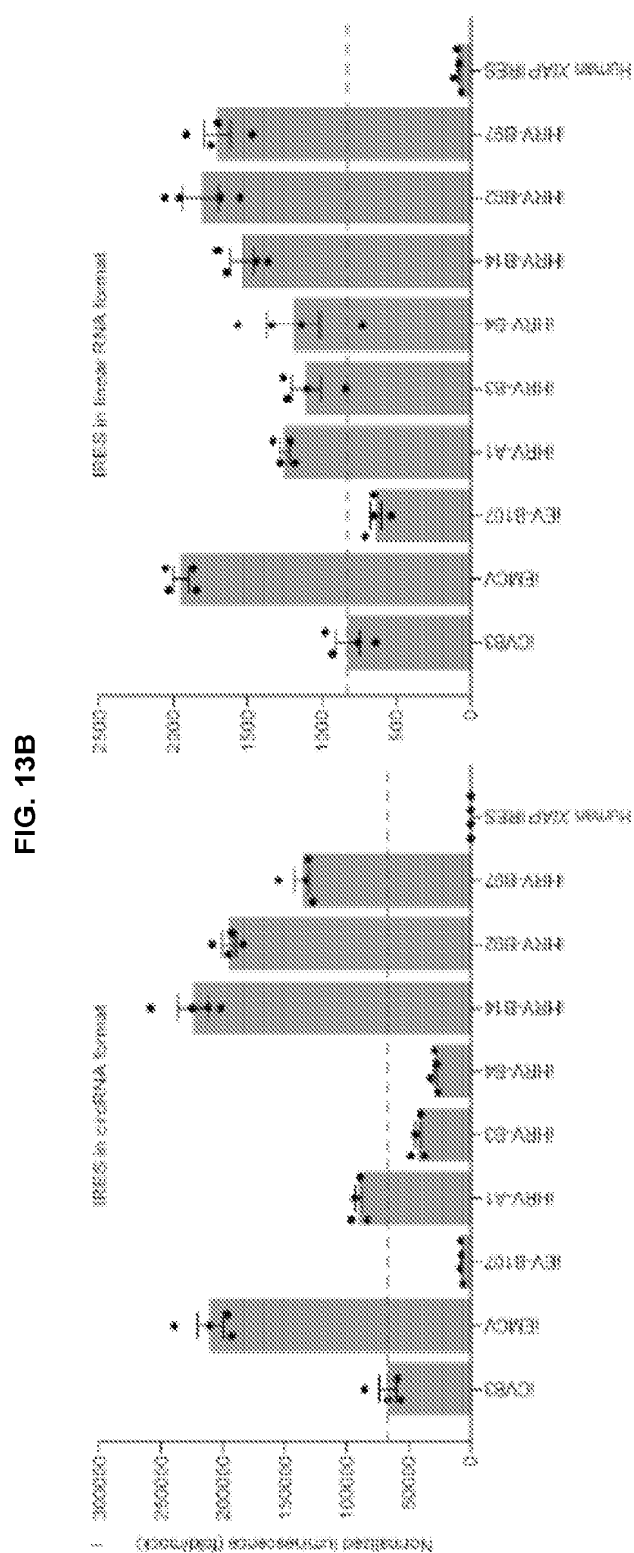


FIG. 14A

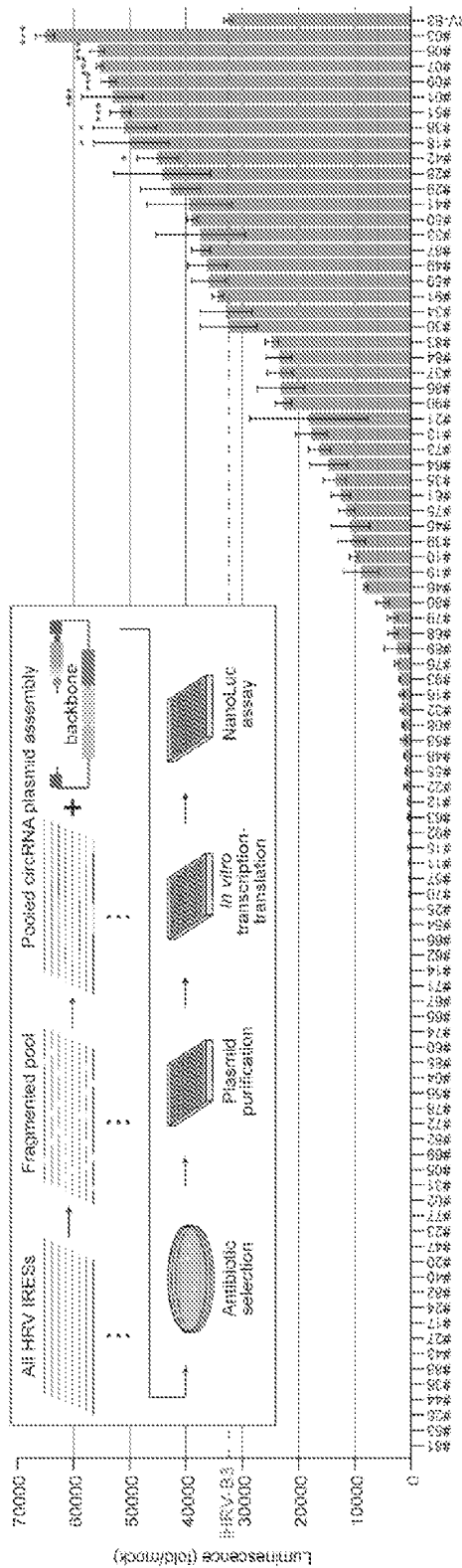


FIG. 14B

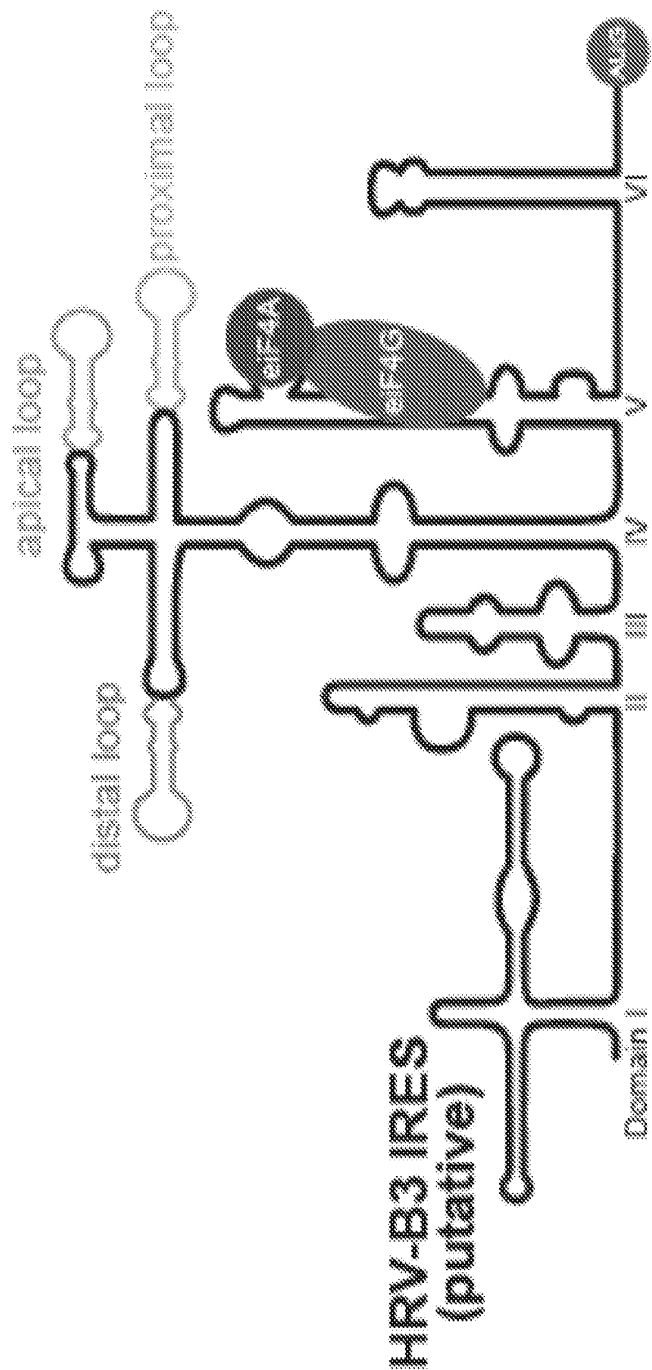


FIG. 14C

Shuffled IRES #	Sequence	SEQ ID NO
1	TTAAACACAGCGGATGGGTACCCACCATCCGACCCACTGGGTGTAGTACTCTGG	33183
	TATTTGTACCTTTGTACGCCTGTTGTTCTTAATGTACCCACCCCTAAAACTTCCAA	
	CCCAAGTAACGTTAGAAGTTTGACATTAAAGTACAATAGGTTGCACTACATCCA	
3	GTGGTGTTCGTACAAGCACTTCTGTTTCCCGGAGCGGGGTATAGACGGTACC	33185
	CACTGTCAAAGCCCTTAACCGTTATCCGCCAATCAACTACGTAATGGCTAGTA	
	ACATCATGAAGGTGAGTTGACGTTTCGATCAGGTGTTAACCCCACTAGTTTGGT	
6	CGATGAGGCTAGGAATCCCCACGGGTAAACCGTGTCTAGCCTGCGTGGCGGC	33184
	CAACCCAGCGTTTGTGGGACGCCAATTCACCTGACATGGTGCGAATACTTGCA	
	GTGCTTGATTGTGATTCCTCCGGCCCTGAATGCGGGTAAACCTAACCCCTGGAG	
3	CCTTGACCAACAATCCAGTGGTGTCTGGGTGTAATGAGTAATCTGGGATGG	33185
	GACCGACTACTTTGGGTGTCGTTCTCATTTTCTTATTATTGTCCTTATGGTC	
	ACAGCATATAGTAATATATACTGTGATC	
1	TTAAACAGCGGATGGGTTTCTACCATCCGACCCACTGGGTGTAGTGTCTGG	33184
	TATATTGACCTTGCACGCCTGTTTCCCTTGTACCCATCCTGAATTTCTCCCT	
	CTGCAACGTTAGAAGTTTGTGAAATTAAGAATACAATAGGAAGCATCACATCC	
3	AGTGGTGTTCAGTACAAGCACTTCTGTTTCCCGGAGCGAGGTATAGGCTGTAC	33185
	CCACTGCCGAAAGCCTTAACCGTTATCCGCCAGCCAACACTACGTAACGGCTAGT	
	AGCACCTTGGATTTAAGTTGGCGTTCGATCAGGTGGTAACCCCACTAGTTTG	
6	GTCGATGAGGCTGAGAACTCCCAAGGTAAACCGTGTCTCAGCCTGCGTGGCG	33184
	GCCAAACCCAGCGTTTGTGGGACGCCCTTTTATAGACATGGTGTGAAGACTCGC	
	ATGTGCTTGGTTGTGATTCCTCCGGCCCTGAATGCGGCTAACCCCTAGG	
3	AGCCTTGTGTTACAAACCAAGTAATATTAAGGTGTAATGAGCAATTCGGGAC	33185
	GGGACCGACTACTTTGGGTGTCGTTTCTGTTTCTTTTCTTTTAAATGTCCTATG	
	GTCACAGCATATATACTGTATATACTGTGATC	
1	TTAAACAGCGGATGGGTATCCCAACCATCCGACCCACTGGGTGTAGTACTCTGG	33184
	TATTATGACCTTGTACGCCTGTTTCCCAAAATCCCTACCCCTTATATCTCTA	
	CCCCGTAAACGTAAGAAGTTTCAACACAGTACAATAGGAAGCACCATCCAGT	
6	GGTGTTATGTACAAGCACTTCTGTTTCCCGGAGCGGAGGTATAGGTGGTCACCA	33185

CCGCCAAAGCCTTTAACCGTTACCCGCCAACCAACTACGTAATGGCTAGTAAC ATCATTGATTTAGATTGGCGTTTCGATCAGGTGGTATCCCCCACTAGTTTGGTC GATGAGGCTAGGAATACCCACGGGTGACCGTGTCTCAGCCTGCGTGGCGGCC AACCAGCGTTTGTCTGGGACGCCAATTCACCTGACATGGTGCGAATACTTGCATG TGCTTGATTGATTCCTCCGGCCCTGAATCGGGTAACCTTAACCCCGGAGCC TTGCAGCATAAACCAATGTTGTGAGGTCGTAATGAGCAATCTGGGATGGGA CCGACTACTTTGGGTGTCGGTGTCTCATTTTCTTATTATTGCTTATGGTCAC AGCATATTTGTTAAATATACTGTGATC	33186
TTAAACAGCGGATGGGTATCCCAACCATCCGACCCACTGGGTGTAGTACTTGG TATTATGTACCTTTGTACGCTGTTTCTCCCTCCCTACCAACCCGCCACCGTATC CCGTAACTTAGAAGAAATTGAACAAATCGCACAAATAGGAGCTATTACAACCACTA ATAGTTGGTGCAAGCACTTCTGTTTCCCGGAGCGAGGTATAGGCTGTACCCAC TGCCAAAAGCCTTAAACCGTTATCCGCCAACCAACTACGTAAACAGCTAGTATCA TCTTGTCTTCACTGGAGTTCGATCAGGTAGGCTTACCCACCTACTAGTTTGG CCGATGAGGCTGGAGTCCCTCACAGGTAACTGTGTCCAGCCTGCGTGGCGG CCAACCCAGCTCTTGCTGGGACGCCCTTTATAGACATGGTGCGAAGACTCGCA TGTGCTTGGTTGTGAGTCTCCGGCCCTGAATGCGGCTAACCTAACCCCTGGA GCCTTGAGTCACAAATCCAGTGATGGCAAGGTCGTAATGAGCAATCTGGGATG GGACCGACTACTTTGGGTGTCGGTGTCTTCTTTATTTATTTATTTGCTTATGGT CACAGCATATATAGCATATATACTGTGATC	33187
TTAAACAGTGGATGGGTTTCTACCATCCGACCCACTGGGTGTAGTCTTGG TATTATGTACCTTTGTACGCTGTTTCCCATTTGATCCCTTCTTAAATCTCTCCC ATGTAACGTTAGAAGTTAAGAACATAAATGTACAATAGGAAGCATCACATCC AGTGGTGTATGGTGCAAGCACTTCTGTTTCCCGGAGCGGAGTATAGACGGCC ACCGCTGTCAAAGCTCTTAACCGTTACCCGCCAGCTAACTACGTAAACGGCTAG TAACATCTTGTGCTTAGGGTTCGATCAGGTGAAGAAAAACCCCTTCAC TAGTCTGGTCGATGAGGCTGAGAAAGTCCCAACGGGTAAACCGTGTCTCAGCCTG CGTGGCGGCCAGCCAGCATATGCTGGGACGCCCTTAAGTATGACATGGTGTGA AGACCCGCATGTGCTTAGCTGTGAGTCTCCGGCCCTGAATGCGGCTAACCTA AACCTGGAGCCTTGGAGCACAAAGCCAGTGCTTGCAAGGTCGTAATGAGCAAT	9

18	TCCGGACGGGACCGACTACTTTGGGTGTCGGTTCCTTTTATTTTCAATTATTG TTCTTATGGTTACAATATATAGAGTATATTGTAATC TTAAAAACGGGGTGGTTCCCTACCATCCGACCCACTGGGTGTAAGTACTCTGG TACTCTGTACCTTTGTACGCTGTTTATCCACTACCTTTTCTAAATTTCCACCC GTGTAACCTTAGAAGCAAAATTTGTTCCCGGAGCGGGTATAGACGGTCAACAGTGA GTACAGTACAAGCACTTCTGTTCCCGGAGCGGGTATAGACGGTCAACAGTGA GTCAAAAGCCCTTAACCGTTACCGCCCAACCACTACGTAACGGCTAGTAACAC CATGAATTTGTCTTGACGTTGATCAGTGGTAACCCCACTAGTTTGGTCGA TGAGGCTAGGAATCCCAACGGGTGACCGTGTCTAGCCTGCGTGGCGGCCAA CCCAGCGTATGCTGGGACGCTTTTATAGACATGGTGCGAAGACTCGCATGTG CTTGGTTGTGAGTCTCCGGCCCTGAAATGCGGCTAACCTAACCCCGGAGCCA CGCGGCATAATCCAATGTCGTATGGGTGTAATGAGTAATTTCTGGATGGGAC CGACTACTTTGGGTGTCGGTTCCTGTTTCCAAATTAATCTTATGGTCACAG CATATAATAGATATATACTGTGATC TTAAAAACGGGATGGGTATCCCACTCCGACCCACTGGGTGTAAGTACTCTGG TACTTTGTACCTTTGTACGCTGTTTCCCTCTTTGACCGCCCTTCAAGCTCCT TGCCCAAGTAACGTTAGAAGTTGAACATTTGTTACCAATAGGAAGCATCACATC CAGTGGTGTACTGTACAACACTTCTGTTGCCCCGAGCGAGGTATAGATGGT CCCCACCGTCAAAAGCCTTTAACCGTTATCCGCCAACCACTACGAGACAGCTA GTAATGCCCTGTTCTCTGCAAGGCGTTCGATCAGACAGATTTCCCTCTGTTAG TCTGGTCGATGAGGCTAGGAGCTCCCAACGGGCGACCGTGTCTAGCCTGCGT GGCGGCCAGCCAGCTTTTGTGGGACGCTTTTCAAAGACATGGTGTGAAGA CCTGCATGTGCTTGTGTGAGTCTCCGGCCCTGAATGCGGCTAACCTTAACC CTGGAGCCTTATGCCACGAACCACTGTTGTAAGGTCGTAATGAGTAATCTG GGATGGGACCGACTACTTTGGGTGTCGGTTCCTTTATCTTAICATTTGTGT TTCATGGTTACAAGCATTTTGTGAATC TTAAAAACAGTGGATGGGTTTCTACCATCCGACCCACTGGGTGTAAGTCTCTGG TATATTGTACCTTTGCACGCTGTTTCCCATTTGACCTTCTTAAATTTCTCCCC ATGTAACGTTAGAAGTTTAAAGAACATAAATGTACAATAGGAAGCATCACATCC AGTGGTGTATGGTACAAGCACTTCTGTTTATCCGGAGCGAGGTATAAGCGGTA CCCACTGCTGAAAGCCTTTAACCGTTACCCGCGCAGCCAACTACGTAAAAAGCTAG	33188
38	TTAAAAACAGGCGGATGGGTATCCCACTCCGACCCACTGGGTGTAAGTACTCTGG TACTTTGTACCTTTGTACGCTGTTTCCCTCTTTGACCGCCCTTCAAGCTCCT TGCCCAAGTAACGTTAGAAGTTGAACATTTGTTACCAATAGGAAGCATCACATC CAGTGGTGTACTGTACAACACTTCTGTTGCCCCGAGCGAGGTATAGATGGT CCCCACCGTCAAAAGCCTTTAACCGTTATCCGCCAACCACTACGAGACAGCTA GTAATGCCCTGTTCTCTGCAAGGCGTTCGATCAGACAGATTTCCCTCTGTTAG TCTGGTCGATGAGGCTAGGAGCTCCCAACGGGCGACCGTGTCTAGCCTGCGT GGCGGCCAGCCAGCTTTTGTGGGACGCTTTTCAAAGACATGGTGTGAAGA CCTGCATGTGCTTGTGTGAGTCTCCGGCCCTGAATGCGGCTAACCTTAACC CTGGAGCCTTATGCCACGAACCACTGTTGTAAGGTCGTAATGAGTAATCTG GGATGGGACCGACTACTTTGGGTGTCGGTTCCTTTATCTTAICATTTGTGT TTCATGGTTACAAGCATTTTGTGAATC TTAAAAACAGTGGATGGGTTTCTACCATCCGACCCACTGGGTGTAAGTCTCTGG TATATTGTACCTTTGCACGCTGTTTCCCATTTGACCTTCTTAAATTTCTCCCC ATGTAACGTTAGAAGTTTAAAGAACATAAATGTACAATAGGAAGCATCACATCC AGTGGTGTATGGTACAAGCACTTCTGTTTATCCGGAGCGAGGTATAAGCGGTA CCCACTGCTGAAAGCCTTTAACCGTTACCCGCGCAGCCAACTACGTAAAAAGCTAG	33190
42		

TAAACATCTTTGTTGTAACTTGGCGTTCGATCAGGTGGATTCCCCCTCCACTAGTT
TGGTCGATGAGGCTAGGAACTCCACACGGTGACCGTGTCTAGCCTGCGTGG
CGGCCAACCCAGCTCTTGCTGGACGCCCTTTATAGACATGGTGTGAAGACTC
GCATGTGCTTGGTTGTATTCTCCGGCCCCCTGAATGCGGTAAACCCCTAACCC
GGAGCCGTTGCCCATATCCAATGGTTTGGGTGCGTAATGGGCAACTCTGGG
ATGGGACCAACTACTTTGGGTGCCGTCTTCTGTTTTCTTTAAATGTCCTTA
TGGTCACAGCATATAGTAATTATATACTGTGATC
33191
TTAAACAGCGGATGGGTTCTCCACCATCCGACCCACTGGGTGTAGTACTCTG
GTATTCTGTACCTTTGTACGCTGTTTCTCCACCCCCCGTCTCTAAATAATCCC
AGTAACCTTAGAAGATTTGAACTATTGTACAATAGGCGTGTACATCCAGTGGC
GGCTAGTACAAAGCACCTTCTGTTTCCCGGAGCGGAGTATAGATGGCCACCGCT
GTCAAAAGCTCTTAACCGTTATCCGCCAATTAACTACGCAACGGCTAGTAATAT
CATGTAACCTTTAGGGTGTTCGATCAGGTGAGTGTACCCCTCACTAGTCTGGTC
GATGAGGCTGAGAAATCCCCACGGGCGACCGTGTCTCAGCCTGCGTGGCGGCC
AGCCAGCTTATGCTGGAGCGCTTAATTGTGACATGGTGTGAAGACTCGCGT
GTGCTTAGCTGTGAGTCCTCCGGCCCTGAATGCGGCTAACCCCTAAGCTGGAG
CCTTGAGTCACAATCCAGTGTGGCAAGGTCGTAATGGGCAACTCTGGGACGG
GACCGACTACTTTGGGTGCCGTCTTCTTTATTTTAAAGTTGTTCTTATGGTC
ACAATATAAGTAATAATATATTGTGATC

51

FIG. 15A

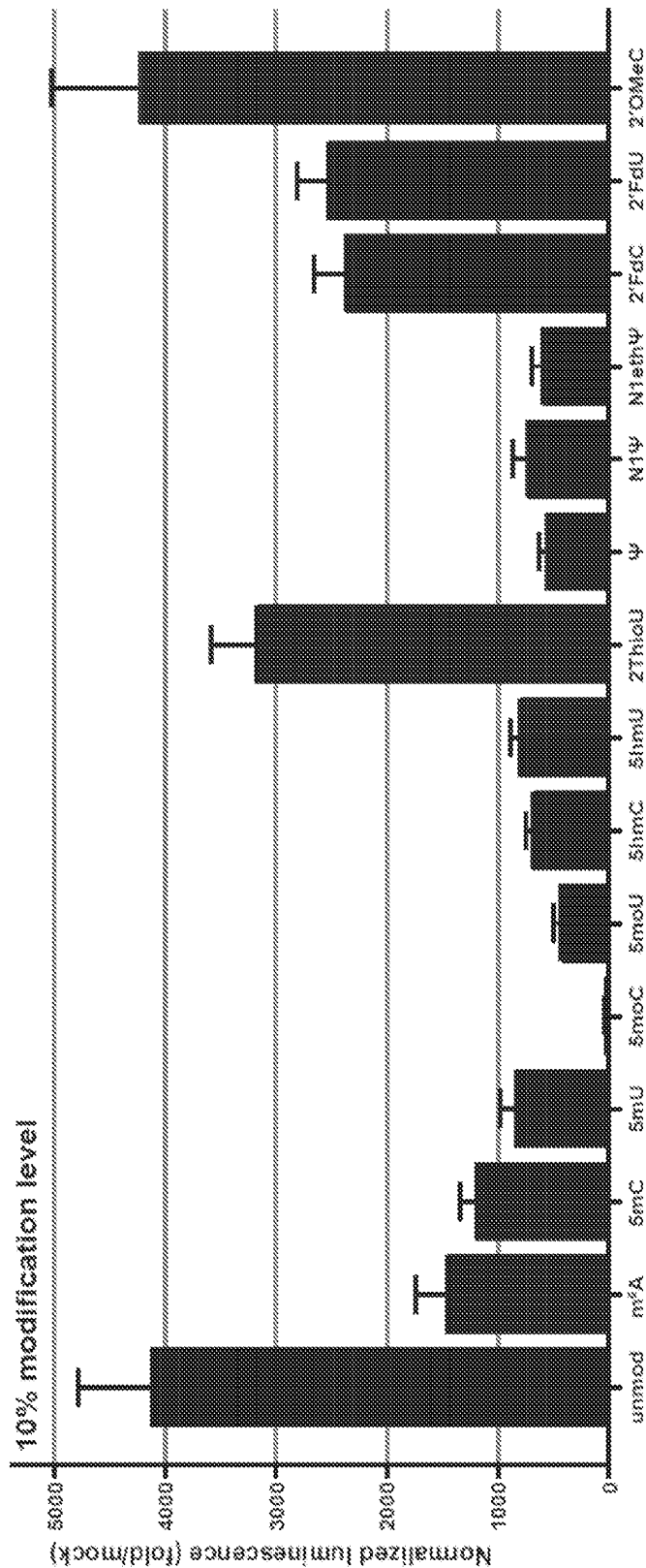


FIG. 15B

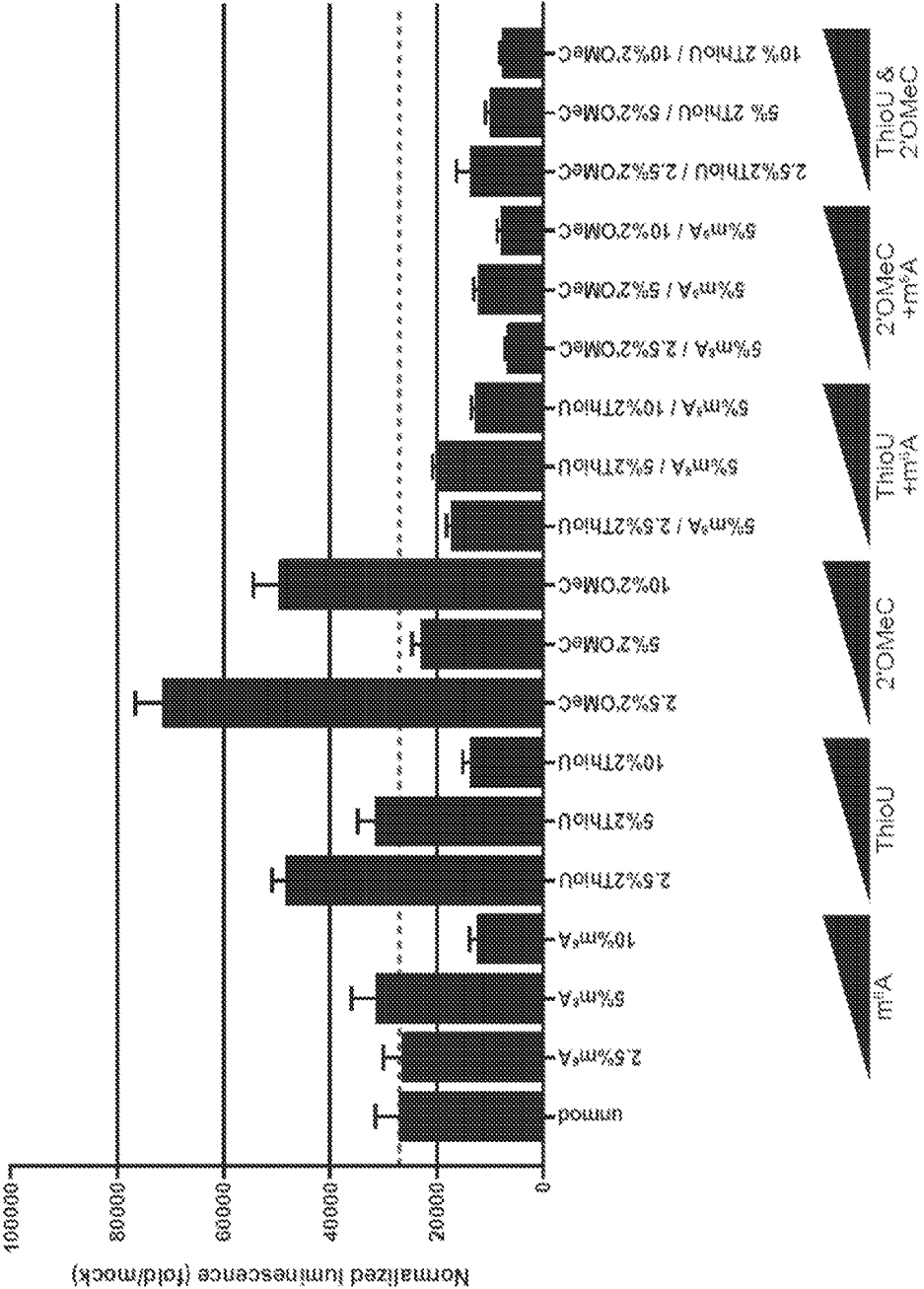


FIG. 16A

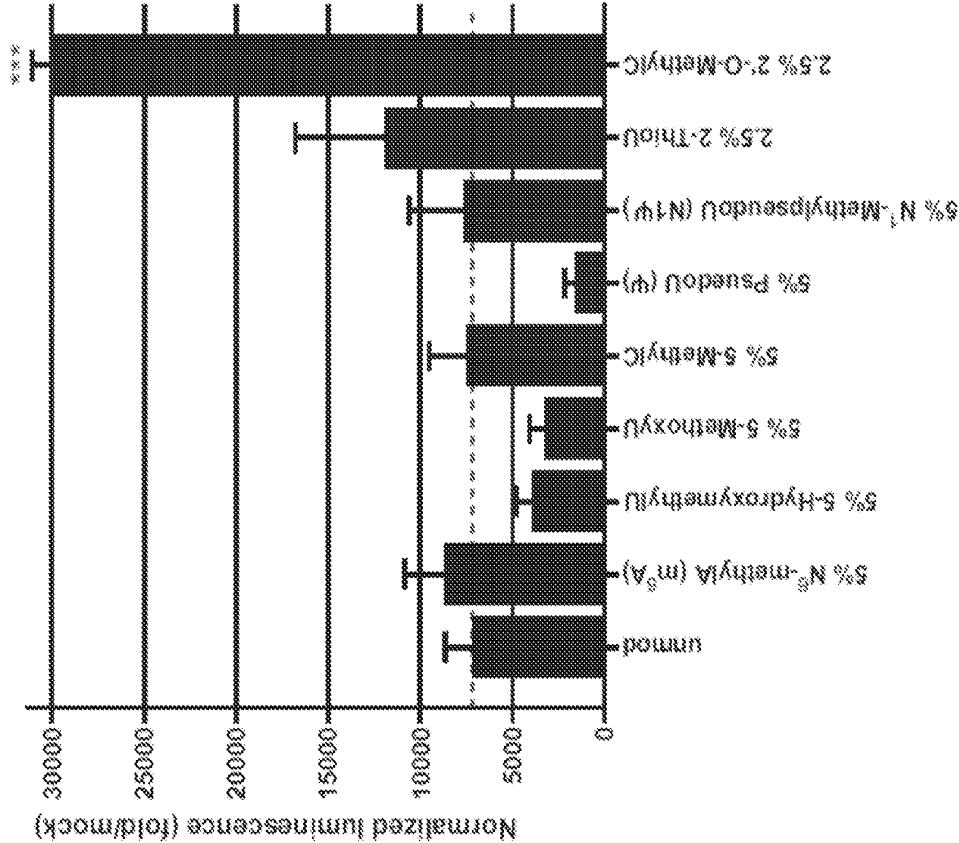


FIG. 16B

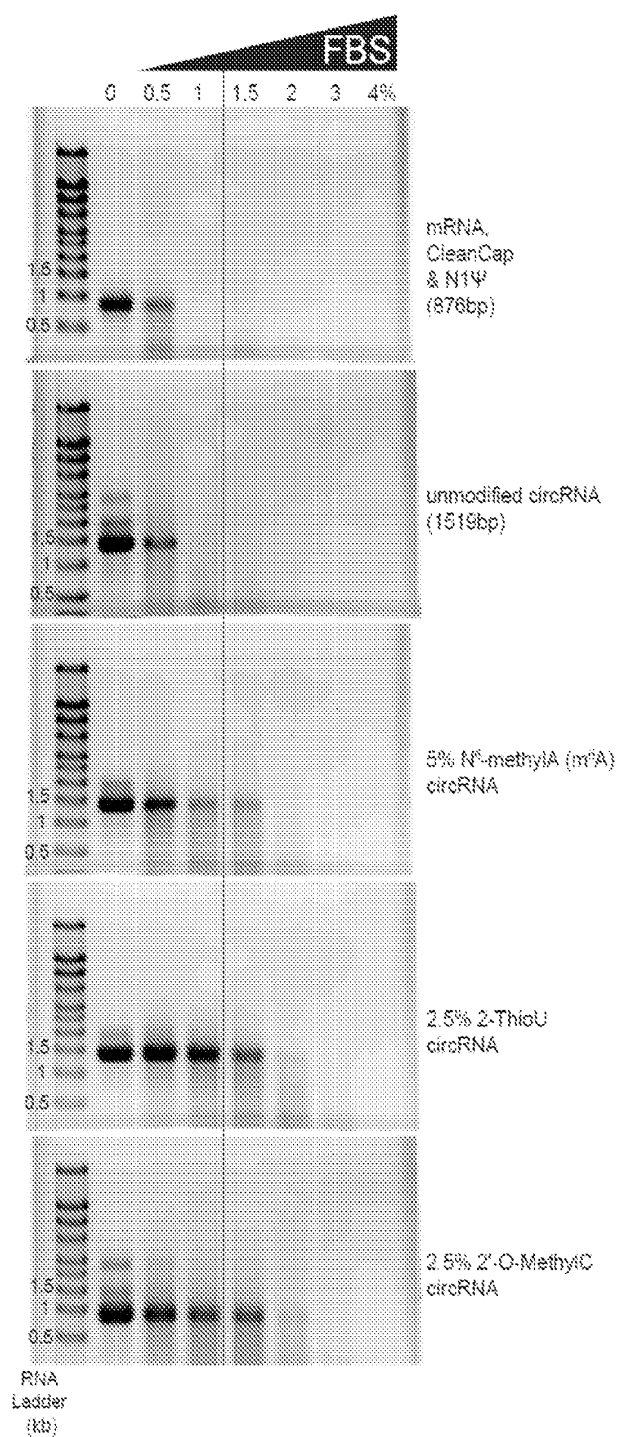


FIG. 16C

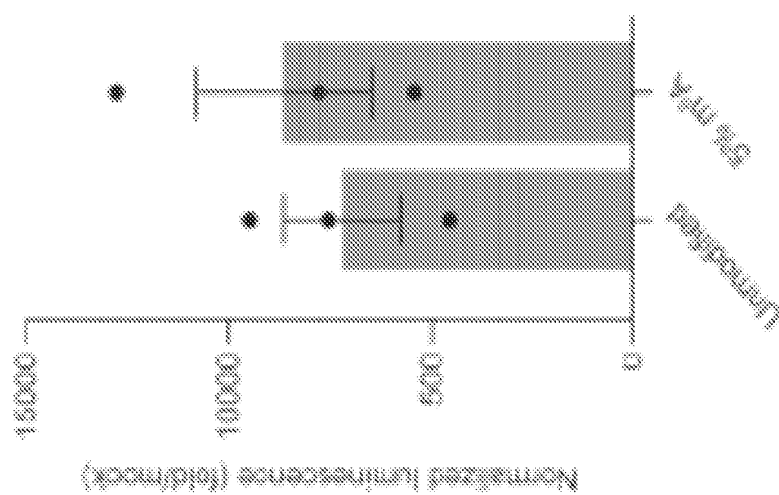


FIG. 16D

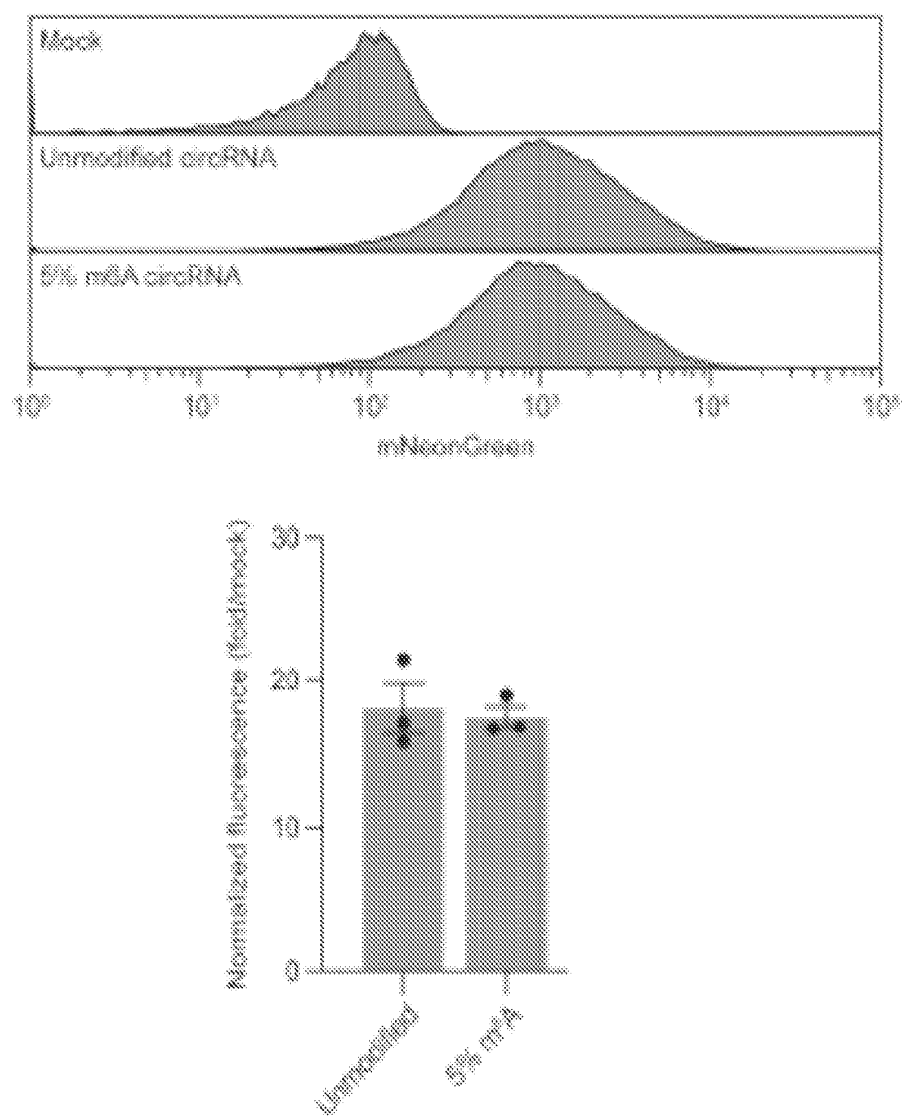
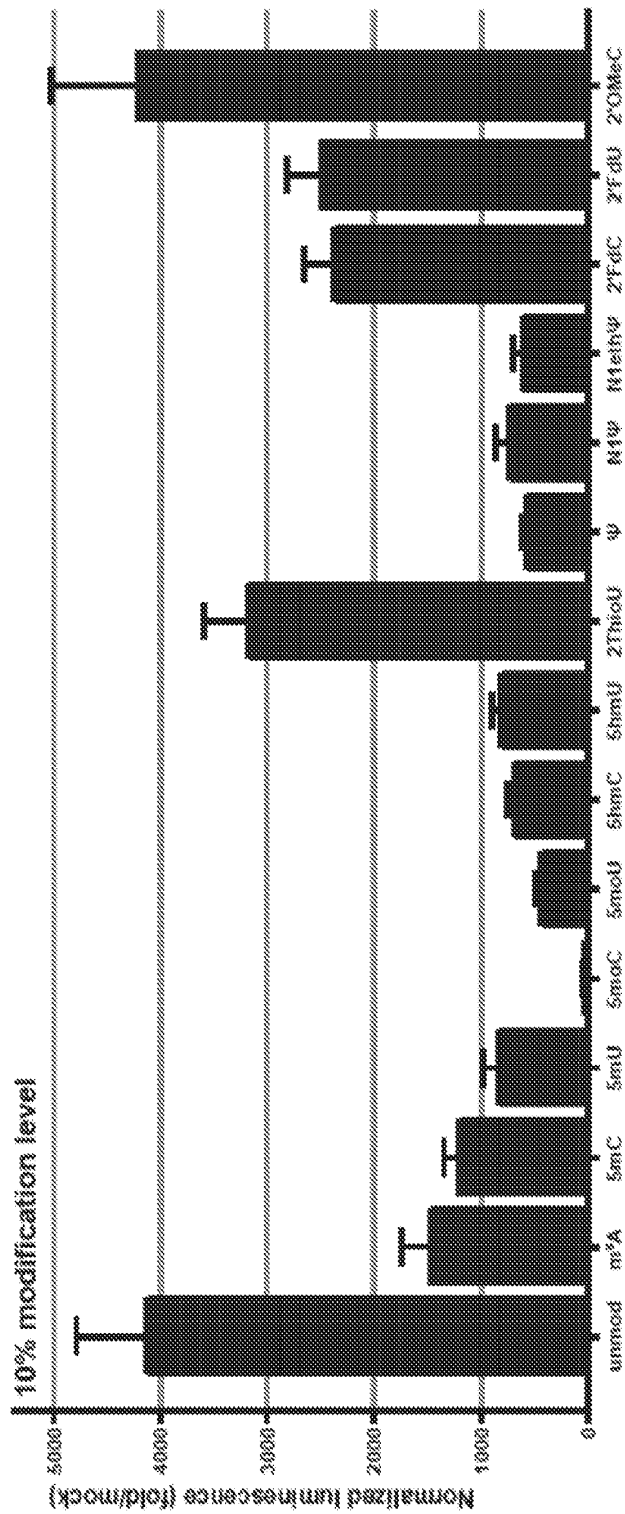


FIG. 17A



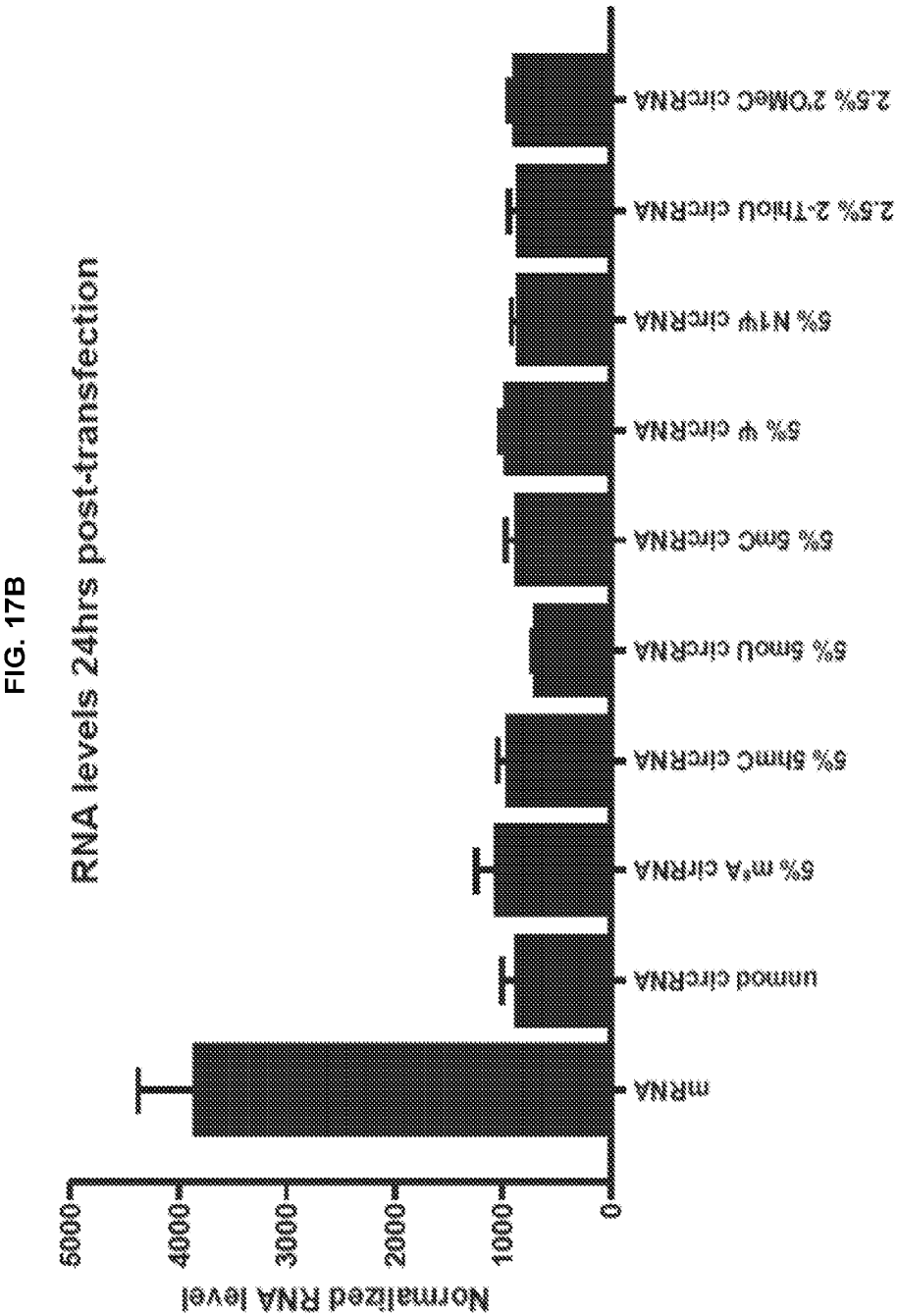


FIG. 17C

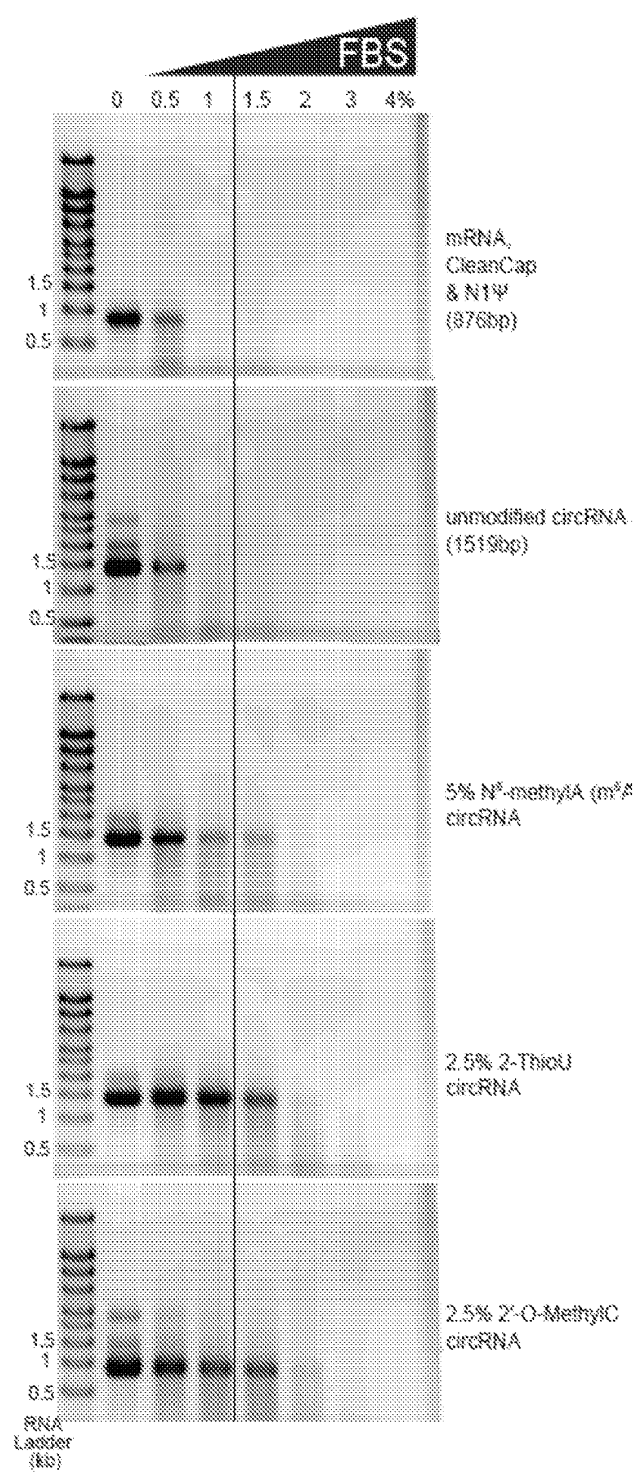


FIG. 17D

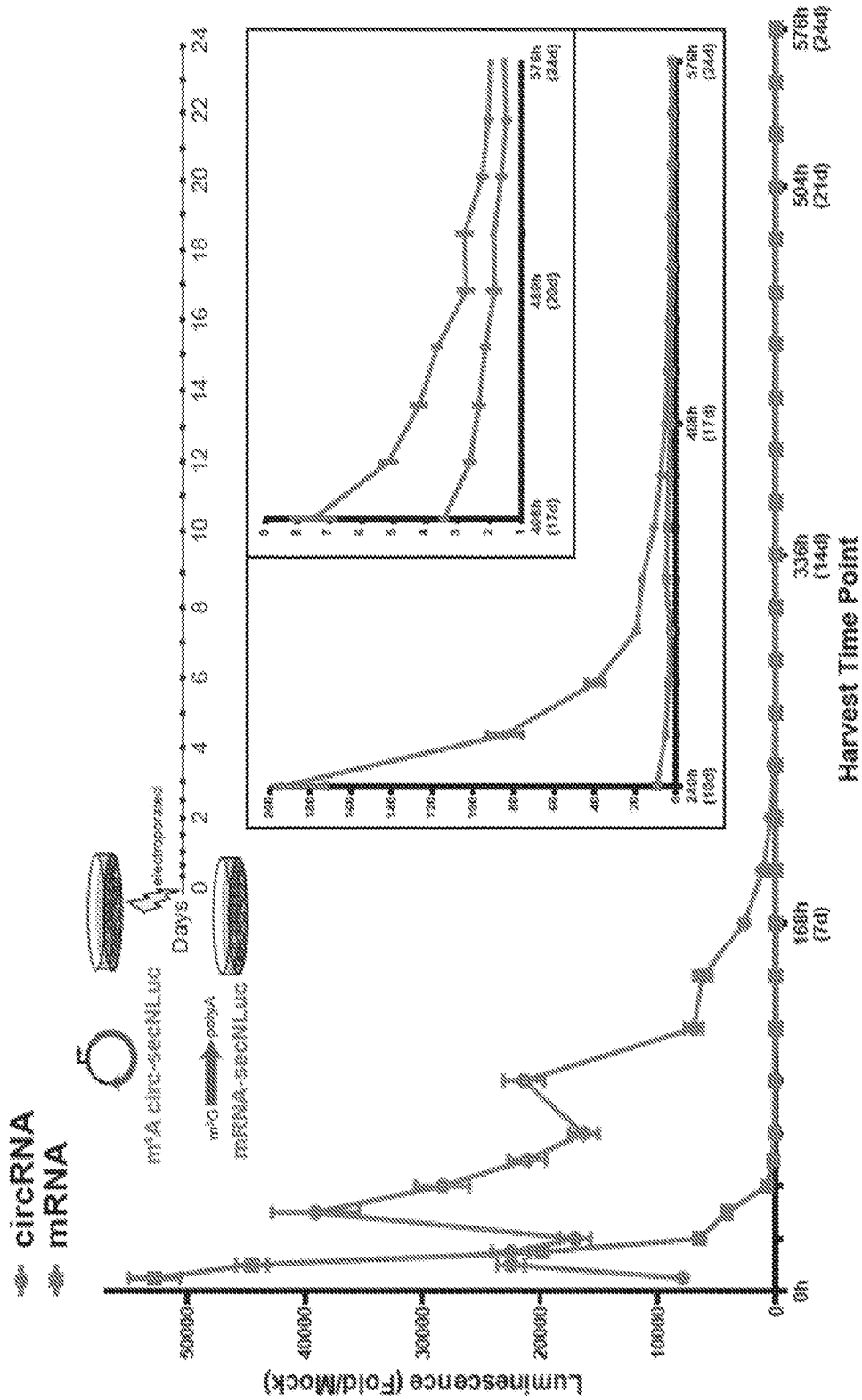


FIG. 18A

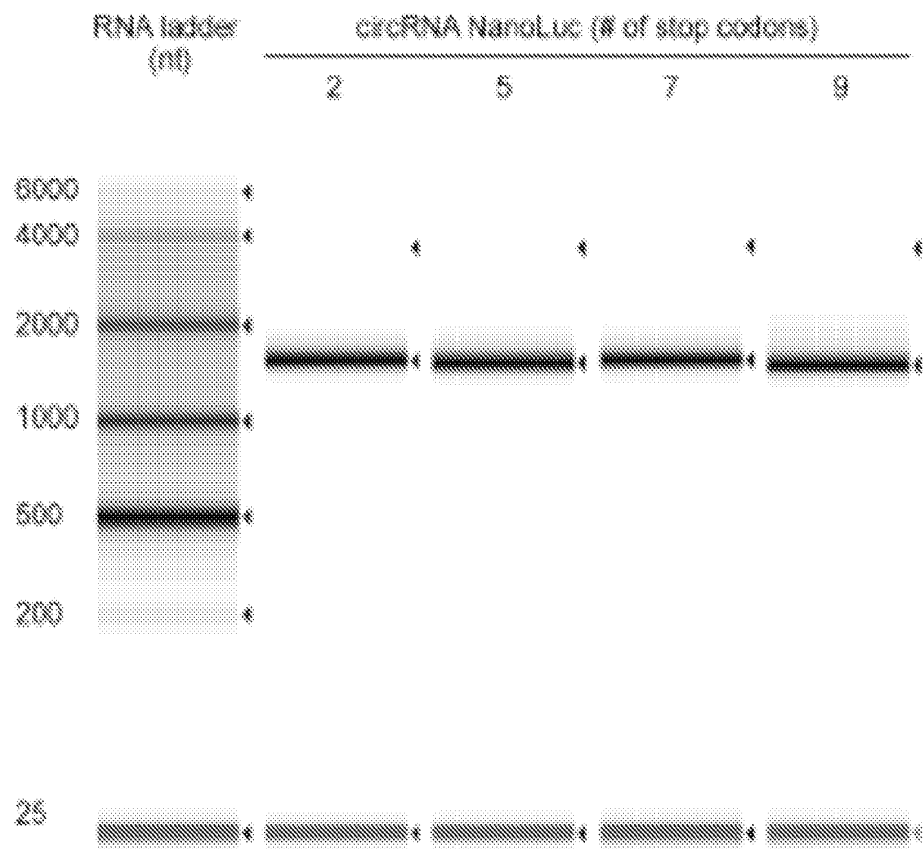


FIG. 18B

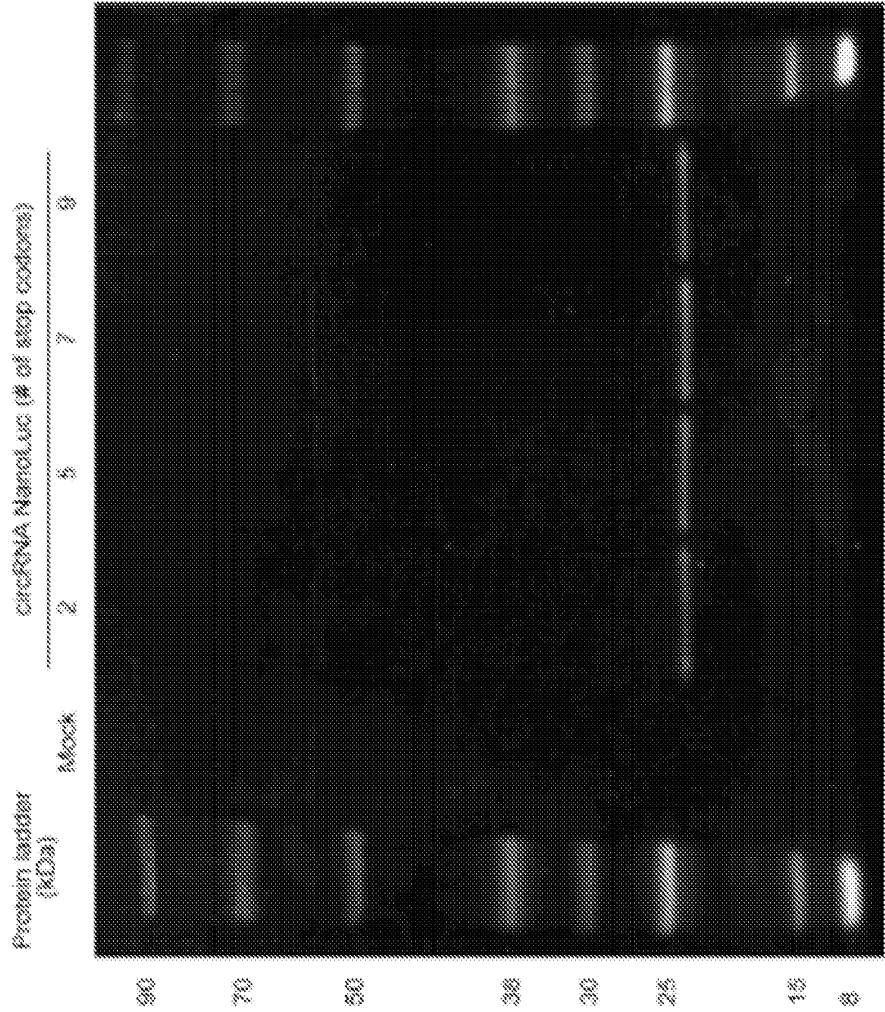


FIG. 19

