

FIG. 1A

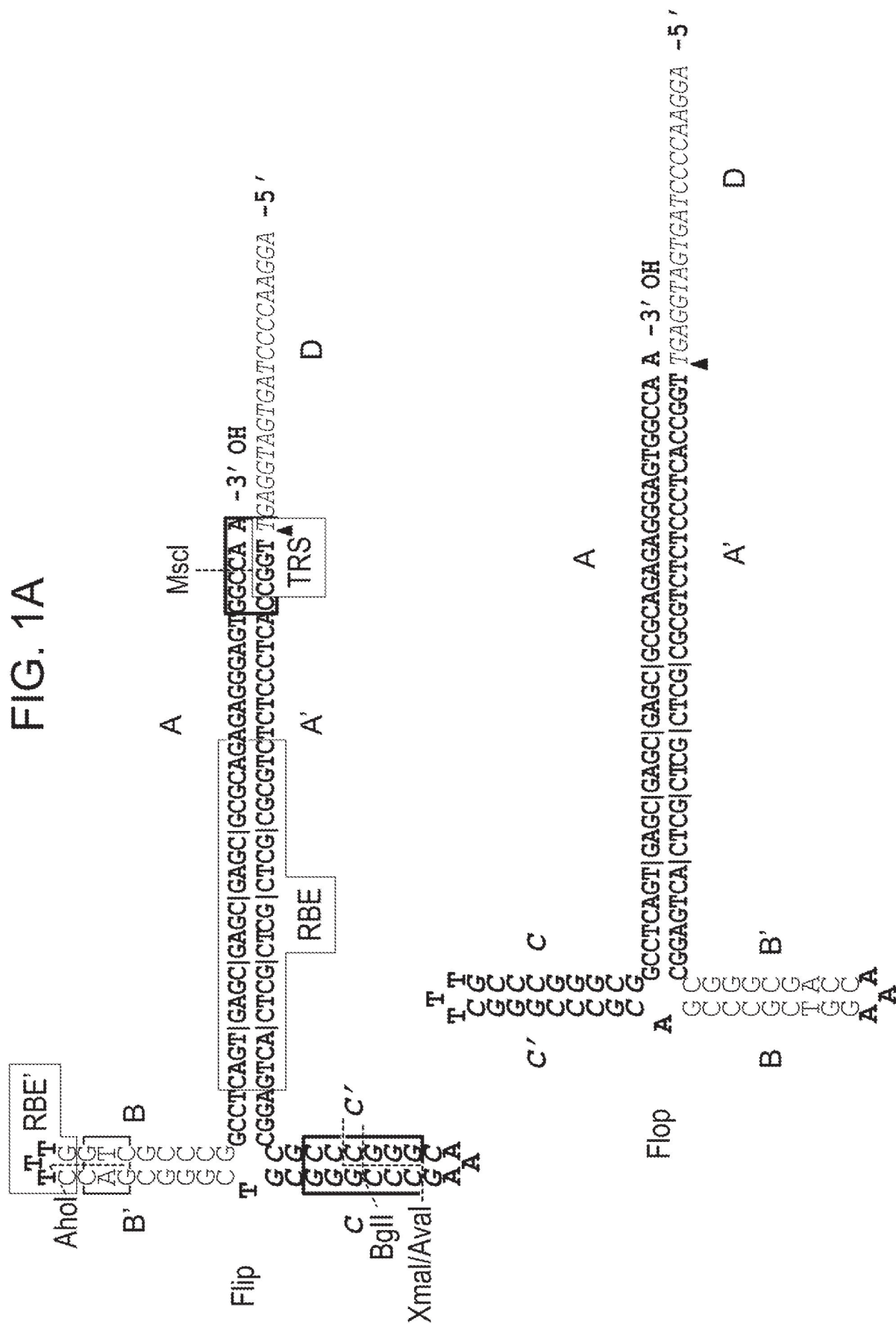


FIG. 1B

1. ITR1-5
2. ITR2-5
3. ITR3-5
4. ITR4-5
5. ITR5-5
6. ITR6-5
7. ITR7-5

	TRS	RBE	
	TTGGC	CACTCCCTCT	TTGCGCGCTCGCTCGCTCGCT-----GGGGCCTGGNGAC
1	TTGCC	CACTCCCTCTCTGCGCGCTCGCTCGCTCGGT	-----GGGGCCTGCGGAC 49
2	TTGGC	CACTCCCTCTCTGCGCGCTCGCTCGCTCACT	-----GAGGCCGGGCGAC 49
3	TTGGC	CACTCCCTCTATGCGCACTCGCTCGCTCGGT	-----GGGGCCTGGCGAC 49
4	TTGGC	CACTCCCTCTATGCGCGCTCGCTCACTCACT	-----CGGCCCTGGAGAC 49
5	-----CTCTCC	CCCTGTGCGGTTCGCTCGCTCGCTGGCTCGTTTGGGGGGTGGCAGCT	55
6	TTGGC	CACTCCCTCTCTGCGCGCTCGCTCGCTCACT	-----GAGGCCGGGCGAC 49
7	TTGGC	CACTCCCTCTATGCGCGCTCGCTCGCTCGGT	-----GGGGCCTGCGGAC 49

		RBE	
	CAAAG-GTCGCCAGACGGCCGNGCTCTGCCCGGGCGGCC-----CCAGCGAGCGA		
1	CAAAG-GTCGC	CAGACGGCAGAGCTCTGCTCTGCCGGCC-----CCA	CCGAGCGA 98
2	CAAAG-GTCGC	CCGACGCCCGGGCTTTGCCCGGGCGGCC-----TCAGT	GAGCGA 98
3	CAAAG-GTCGC	CAGACGGACGTGCTTTGCACGTCCGGCC-----CCA	CCGAGCGA 98
4	CAAAG-GTC	CCAGACTGCCGGCTCTGGCCGGCAGGGC-----CGAGT	GAGTGA 98
5	CAAAGAGCTGCC	CAGACGGCCCTCTGGCCGTTCGCCCCCCCAAACGAGCCAGCGAGCGA	115
6	CAAAG-GTCGC	CCGACGCCCGGGCTTTGCCCGGGCGGCC-----TCAGT	GAGCGA 98
7	CAAAG-GTCGC	CAGACGGCAGAGCTCTGCTCTGCCGGCC-----CCA	CCGAGCGA 98

	D sequence	
	GGGAGCGCGCAAGAGGGAGTGGCCAACTCCATCACTAGGGGT	
	GGGAGCGCGCAAGAGGGAGTGGCCAACTCCATCACTAGGGGT	
1	GCGAGCGCGCAGAGAGGGAGTGGCCAACTCCATCACTAGGGGTAA-----	143
2	GCGAGCGCGCAGAGAGGGAGTGGCCAACTCCATCACTAGGGGTTCCCT-----	145
3	GCGAGTGGCCATAGAGGGAGTGGCCAACTCCATCACTAGAGGTAT-----	143
4	GCGAGCGCGCATAGAGGGAGTGGCCAACTCCATCATCTAGGTTTGGCC-----	146
5	GCGAACGCGACAGGGGGAGAGTGGCCAACTCTCAAGCAAGGGGGTTTGTGA	167
6	GCGAGCGCGCAGAGAGGGAGTGGCCAACTCCATCACTAGGGGTTCCCT-----	145
7	GCGAGCGCGCATAGAGGGAGTGGCCAACTCCATCACTAGGGGTACCG-----	145

D sequence TRS RBE

---NNTACCCCTAG---TGATGGAGTTGGCCACTCCCTCTATGCGCGCTCGCTCGCTCGG

1	-----TTACCCCTAG---TGATGGAGTTGCCACTCCCTCTCTGCGCGCTCGCTCGCTCGG	53
2	---AGGAACCCCTAG---TGATGGAGTTGGCCACTCCCTCTCTGCGCGCTCGCTCGCTCAC	55
3	-----ATACCTCTAG---TGATGGAGTTGGCCACTCCCTCTATGCGCACTCGCTCGCTCGG	53
4	---GGCAAACCAGA---TGATGGAGTTGGCCACATTAGCTATGCGCGCTCGCTCACTCAC	54
5	TACAAAACCTCCTTGCTTGAGAGTGTGGCACTCTCCCCCTGTGCGGTTGCTCGCTCGC	60
6	-----ATACCCCTAG---TGATGGAGTTGCCACTCCCTCTATGCGCGCTCGCTCGCTCGG	53
7	---CGGTACCCCTAG---TGATGGAGTTGGCCACTCCCTCTATGCGCGCTCGCTCGCTCGG	55

T-----**G**GGGCCTGC**N**GACCAAAG-GTC**N**CCAGACGGC**N**NGCTCTGC**N**CGGCC

1	T-----G	GGGCCTGC	GACCAAAG-GT	CCGACAGCGG	AGAGCTCTGCTCTGCC	101
2	T-----G	AGGCCGGG	GACCAAAG-GT	CGCCGACGCC	CGGGCTTTGCCCGGGC	103
3	T-----G	GGGCCTGG	GACCAAAG-GT	CGCCAGACGG	ACGTGCTTTGCACGTCC	101
4	T-----C	GGGCCTGG	GACCAAAG-GT	CTCCAGACTG	CGGCCTCTGGCCGGCA	102
5	TGGCTCGTTTGG	GGGGGTGG	CAGCTCAAAGAG	CTGCCAGACG	AGGCCCTCTGGCCGTGG	120
6	T-----G	GGGCCGGG	CAGAGCAGAG-CT	CTGCCGTCTG	CGGACCTTTGGTCCGCA	101
7	T-----G	GGGCCTGC	GACCAAAG-GT	CCGACAGCGG	CAGAGCTCTGCTCTGCC	103

RBE

GGC CCA_CCGAGCGAGCGAGCGCGCATAGAGGGAGTGGCAA

CCG TGTGTCTATACGGGAGTGGCAA

GGCC-----CCACCGAGCGAGCGAGCGCGCATAGAGGGAGTGGCCAA

1	GGCC-----CCACCGAGCGAGCGAGCGCGCAGAGAGGGAGTGGCCAA	143
2	GGCC-----TCAGTGAGCGAGCGAGCGCGCAGAGAGGGAGTGGCCAA	145
3	GGCC-----CCACCGAGCGAGCGAGTGCGCATAGAGGGAGTGGCCAA	143
4	GGGC-----CGAGTGAGTGAGCGAGCGCGCATAGAGGGAGTGGCCAA	144
5	CCCCCCAAACGAGCCAGCGAGCGAGCGAACGCGACAGGGGGAGAG-----	167
6	GGCC-----CCACCGAGCGAGCGAGCGCGCATAGAGGGAGTGGCCAA	143
7	GGCC-----CCACCGAGCGAGCGAGCGCGCATAGAGGGAGTGGCCAA	145

FIG. 2

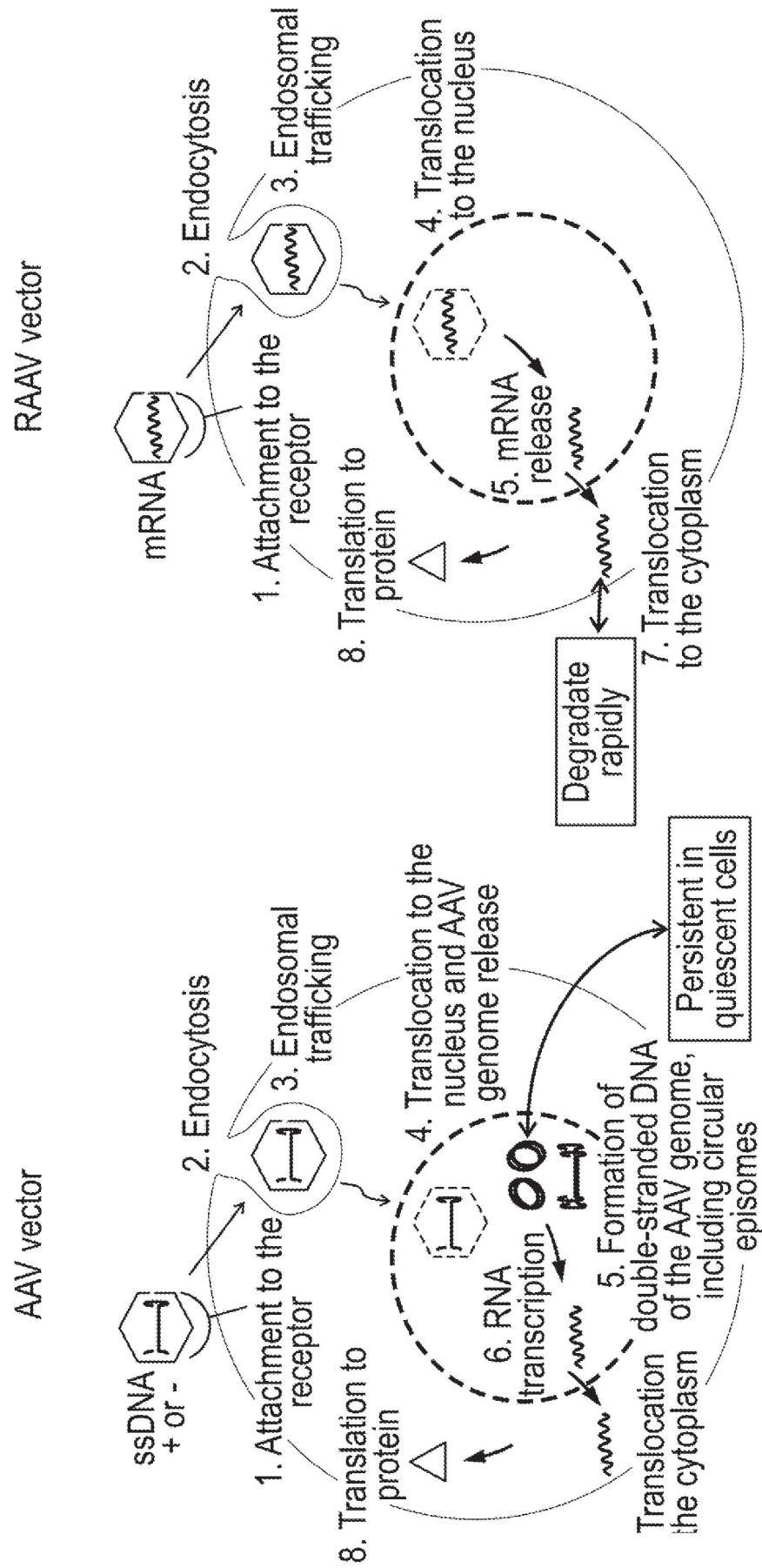


FIG. 3

The schematic diagram of RAAV-ITR transgene plasmids

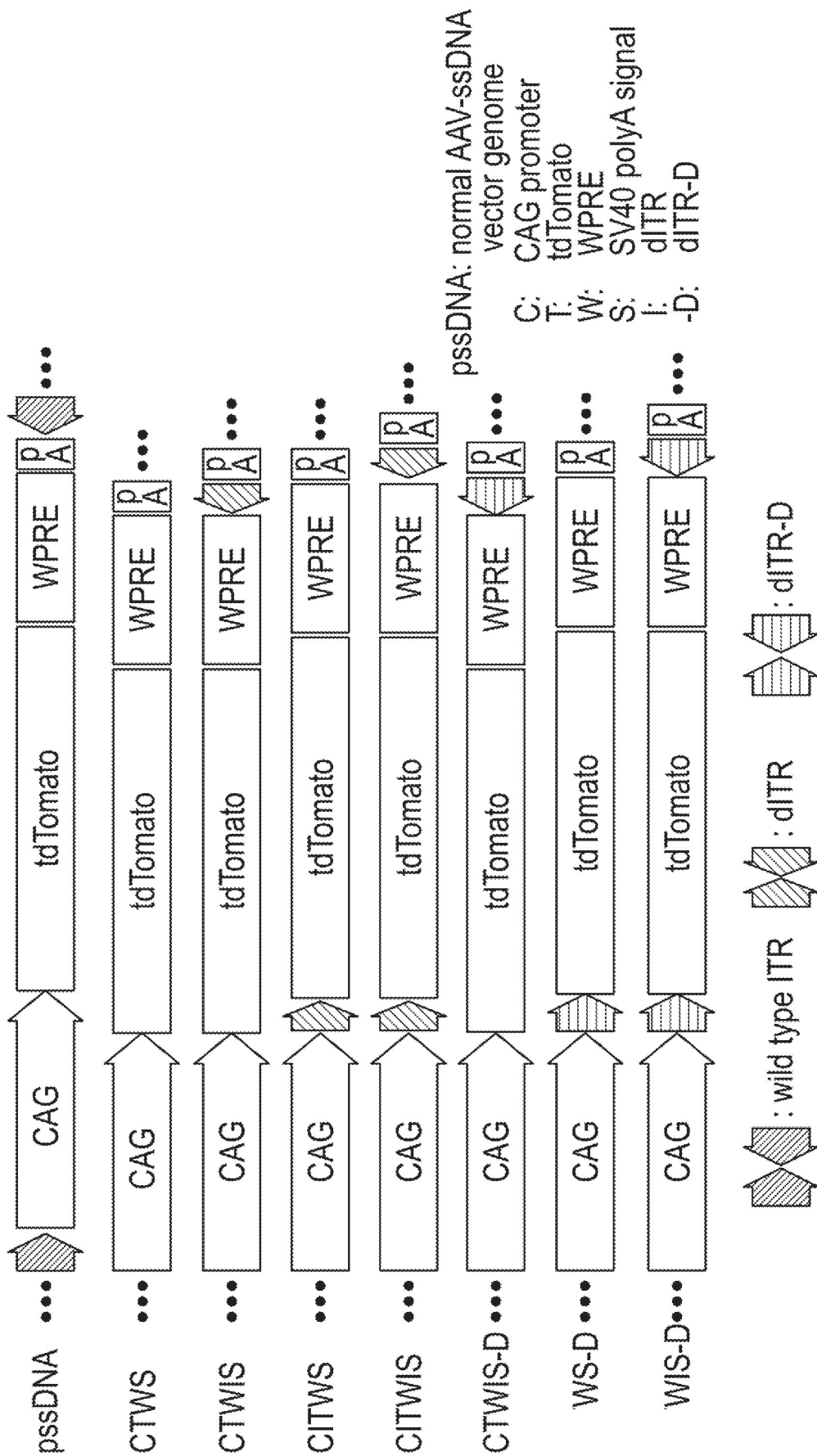


FIG. 4

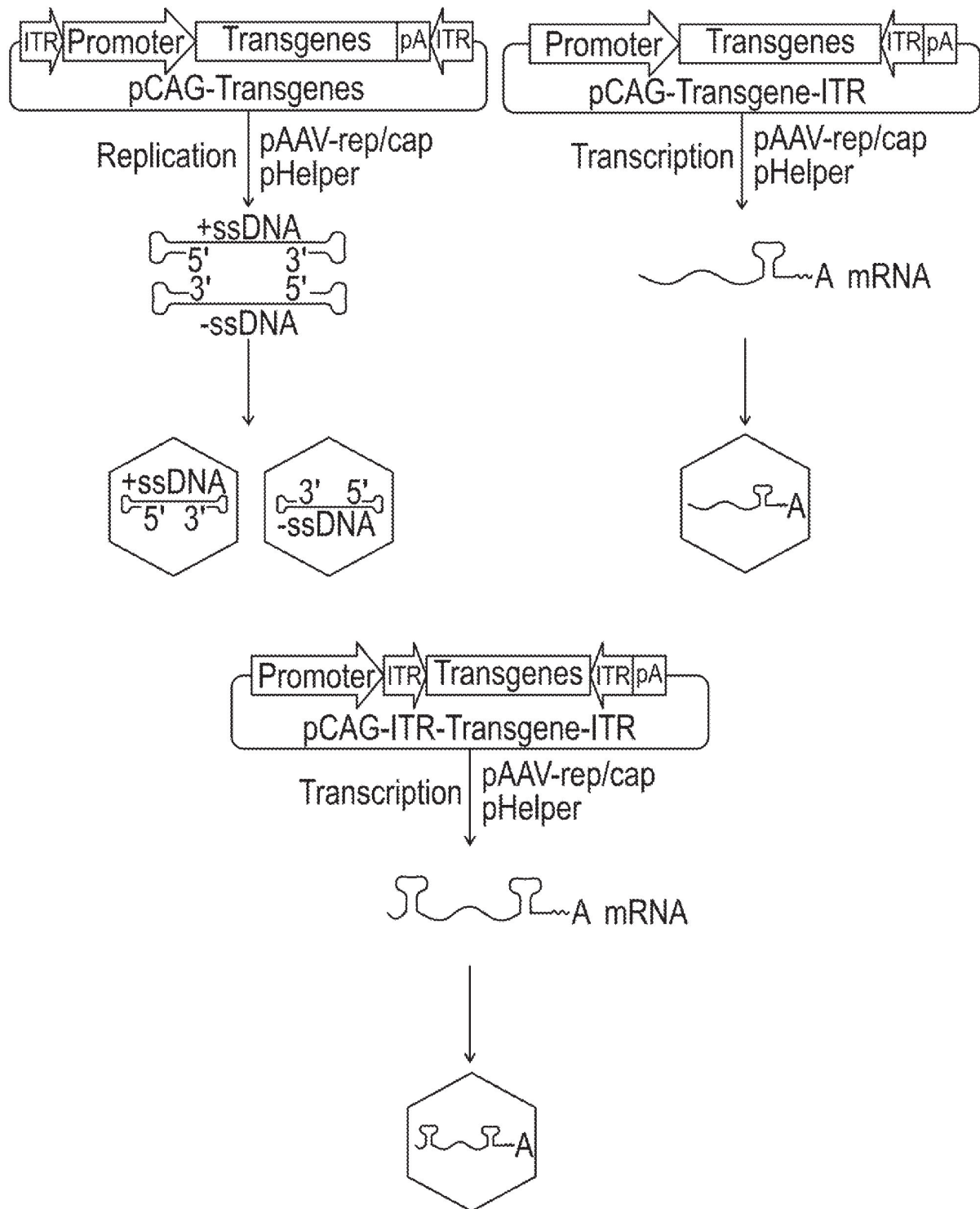


FIG. 5A

Flowchart of RAAV titration

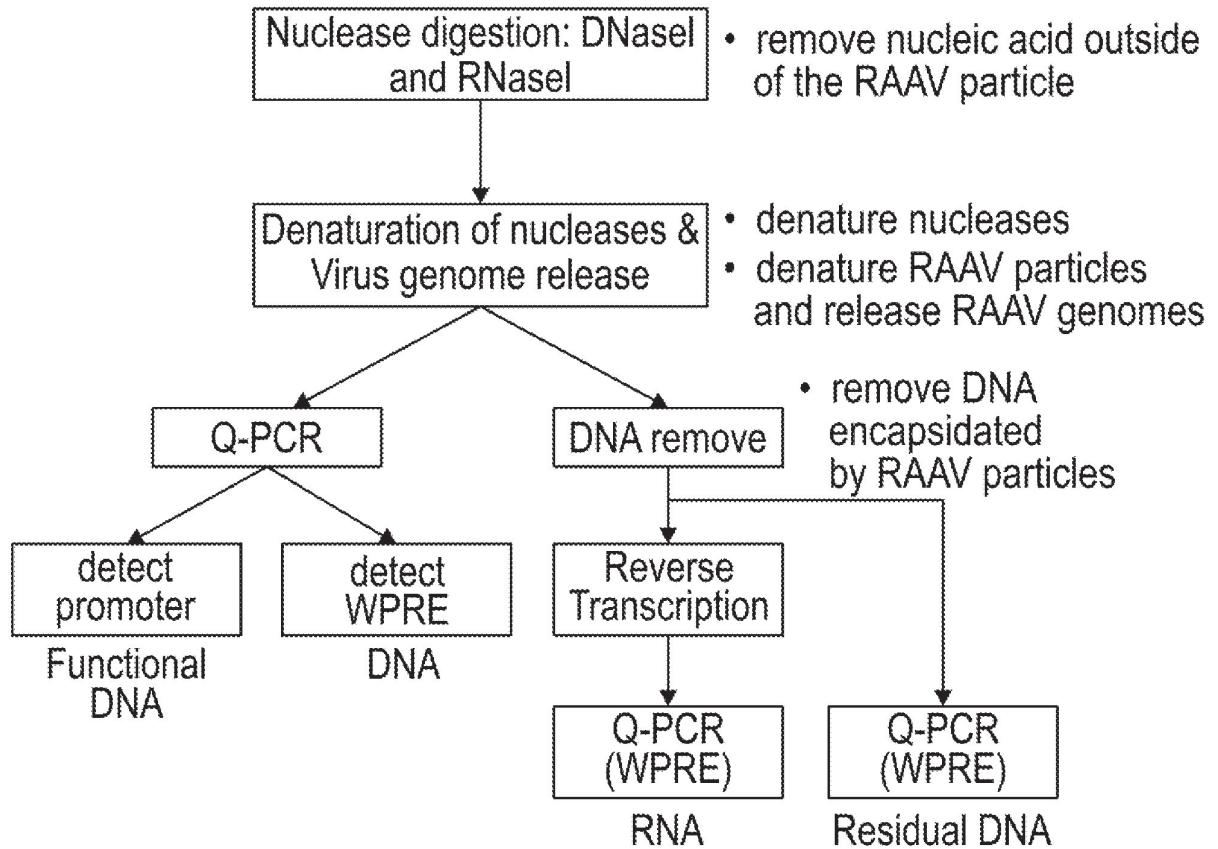


FIG. 5B

Primers and probes for Q-PCR

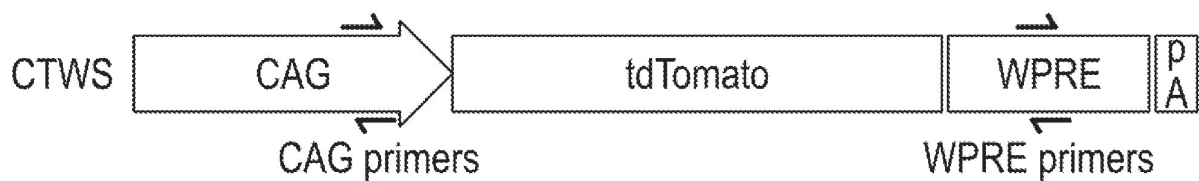


FIG. 6A

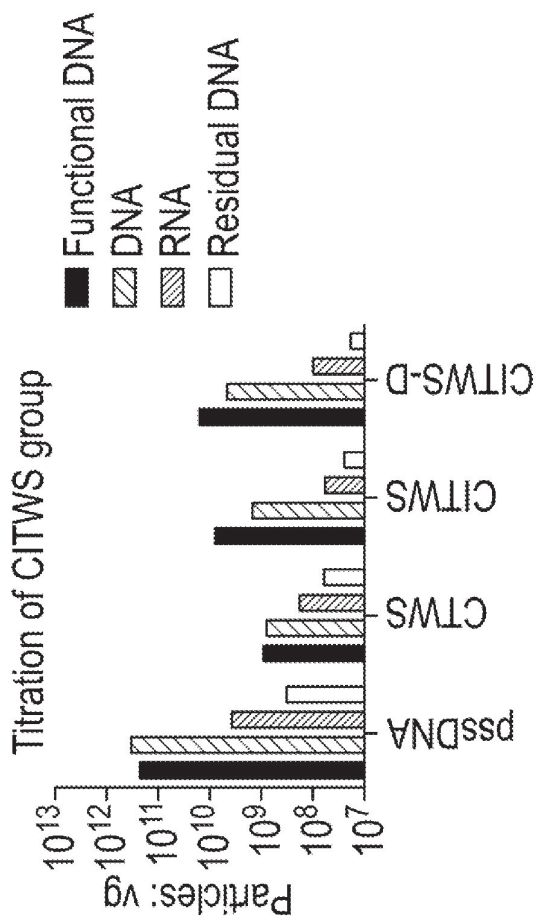


FIG. 6B

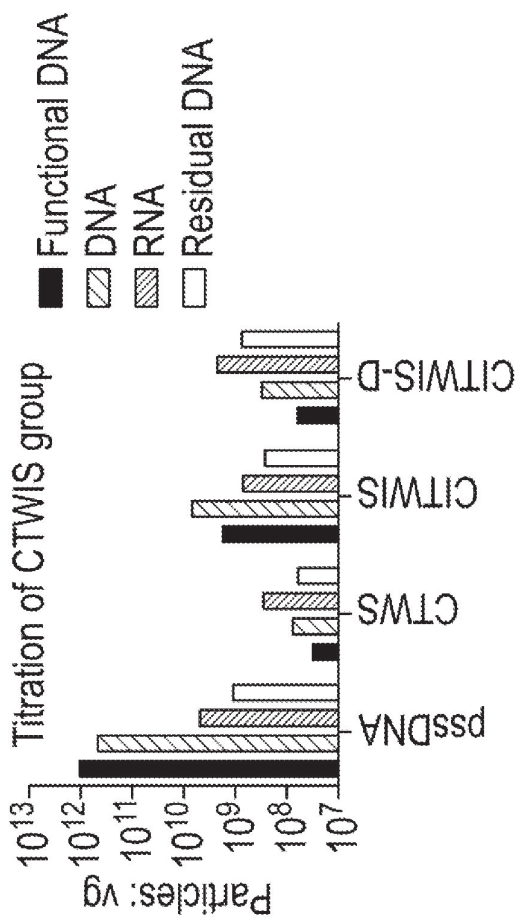


FIG. 6C

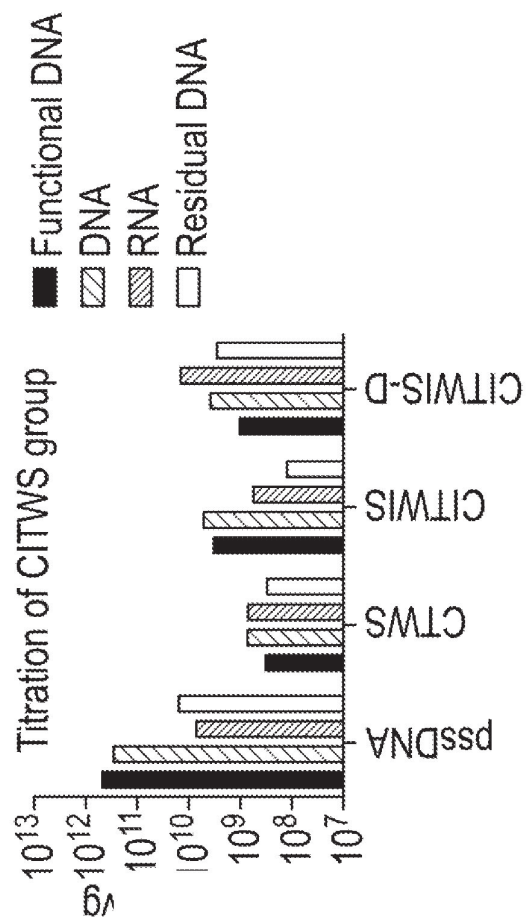


FIG. 7B

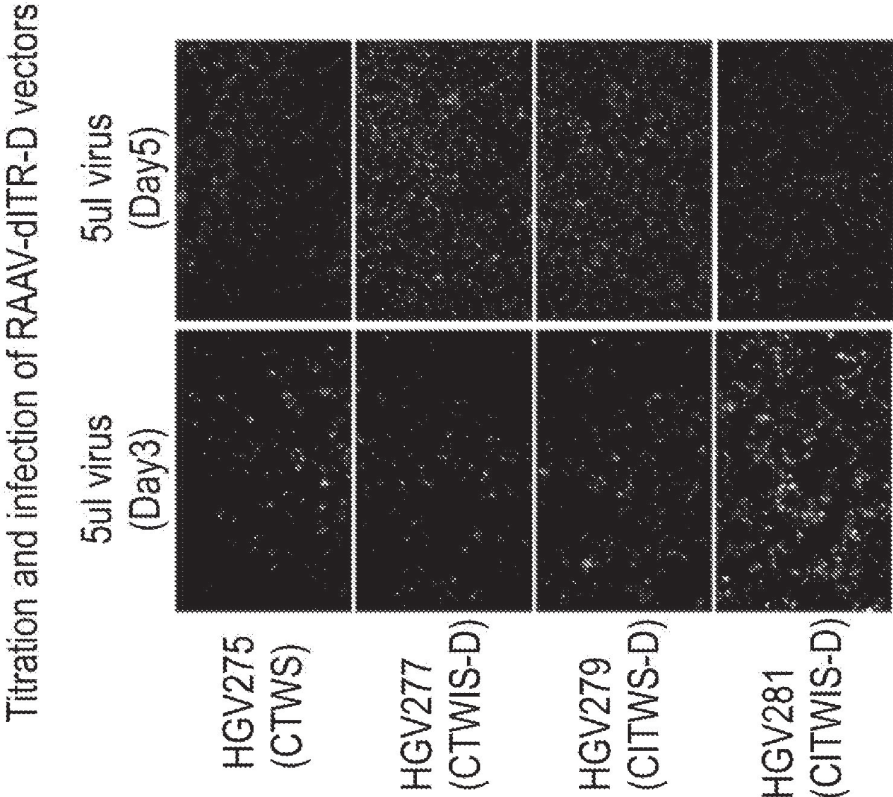


FIG. 7A

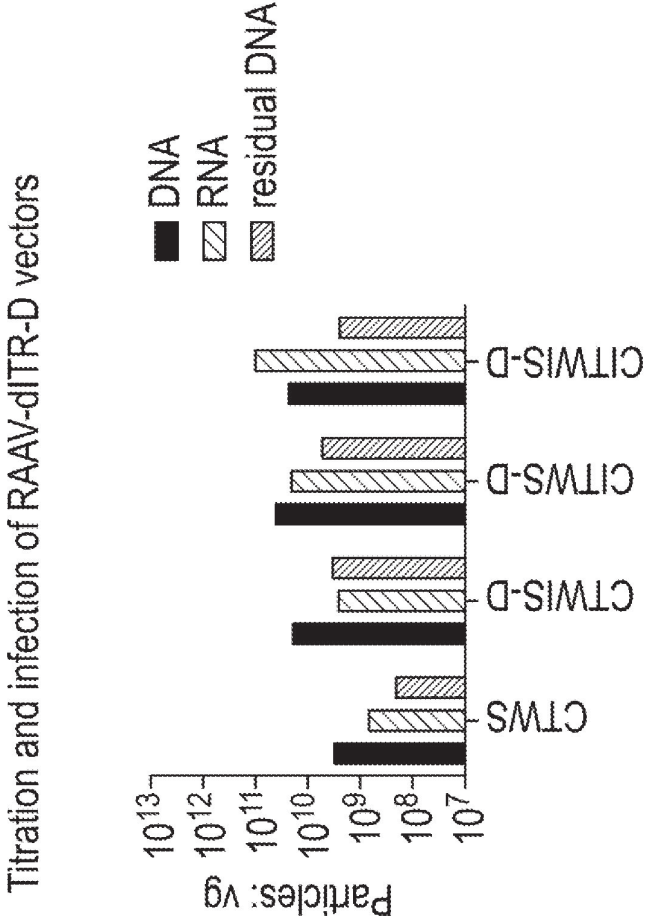


FIG. 8A

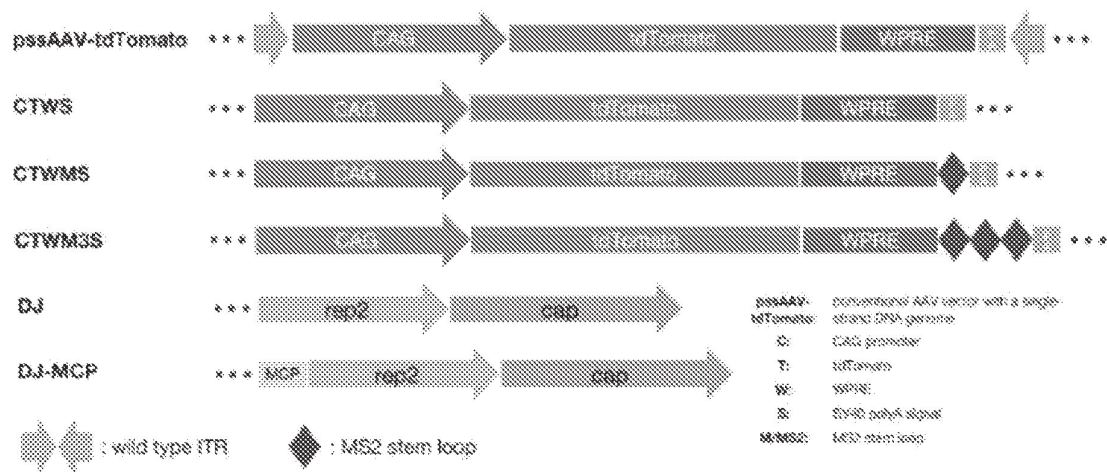


FIG. 8B

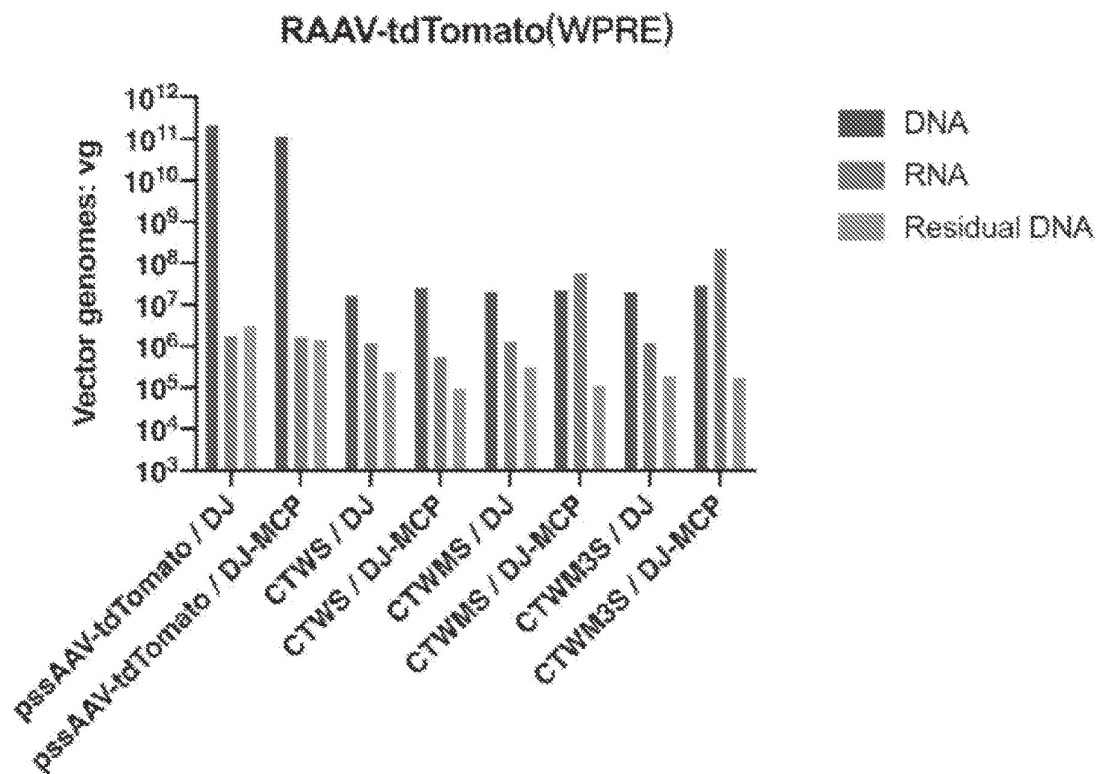


FIG. 9A

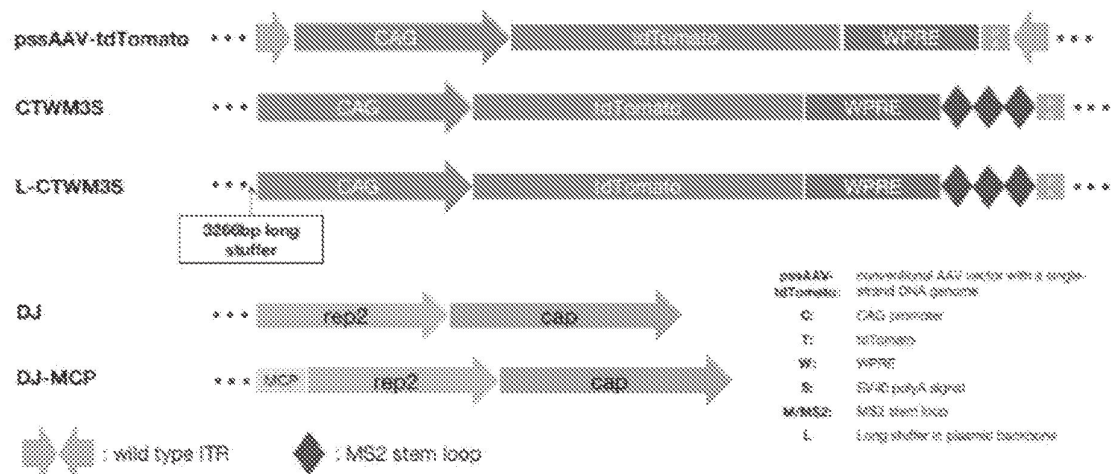


FIG. 9B

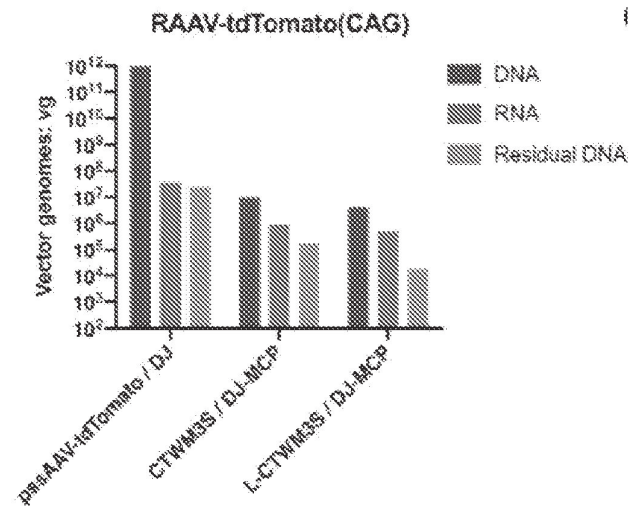


FIG. 9C

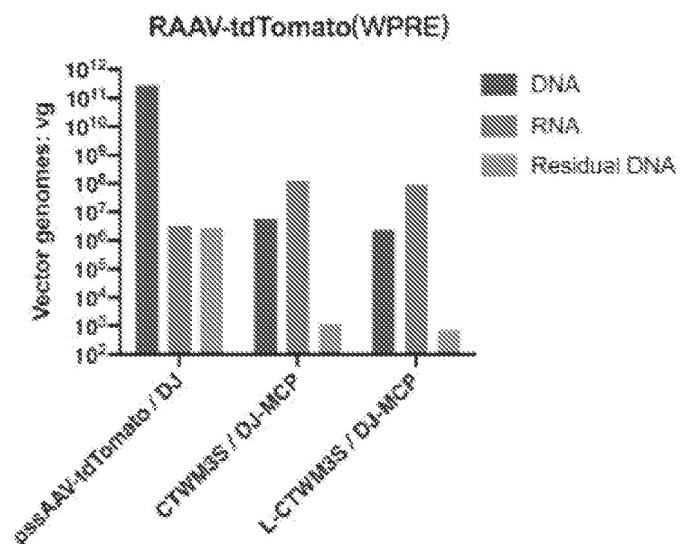


FIG. 10A
RAAV-Cre(CAG)

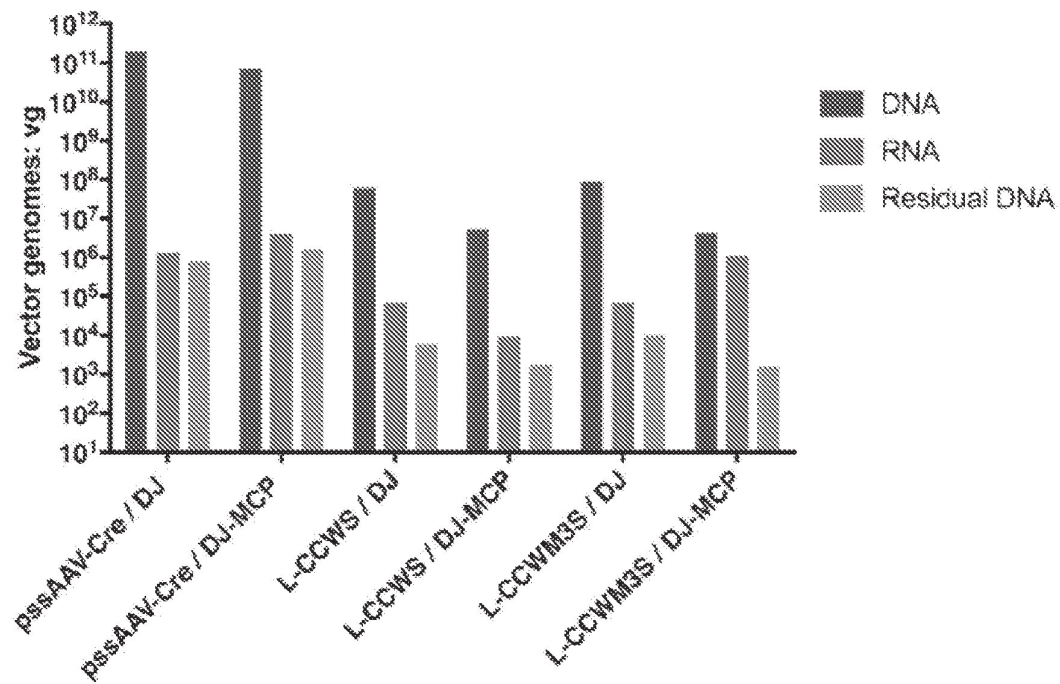


FIG. 10B
RAAV-Cre(WPRE)

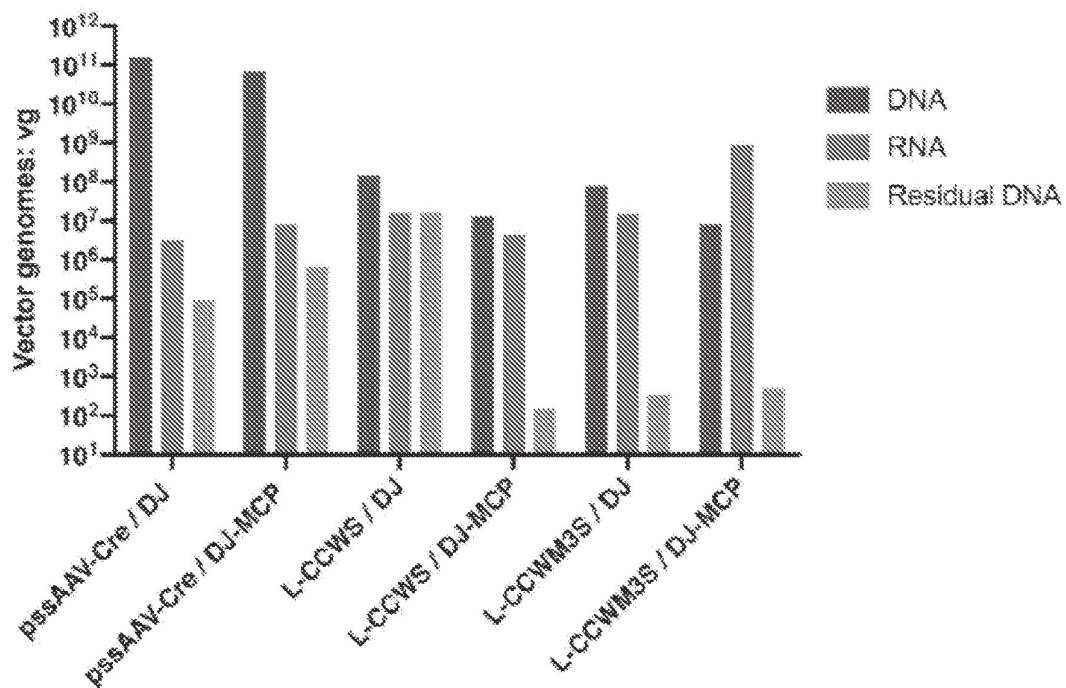


FIG. 11A

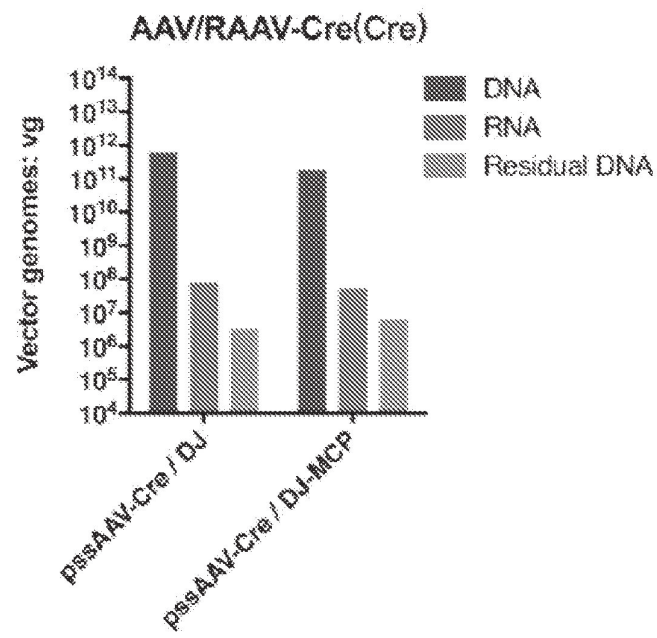


FIG. 11B

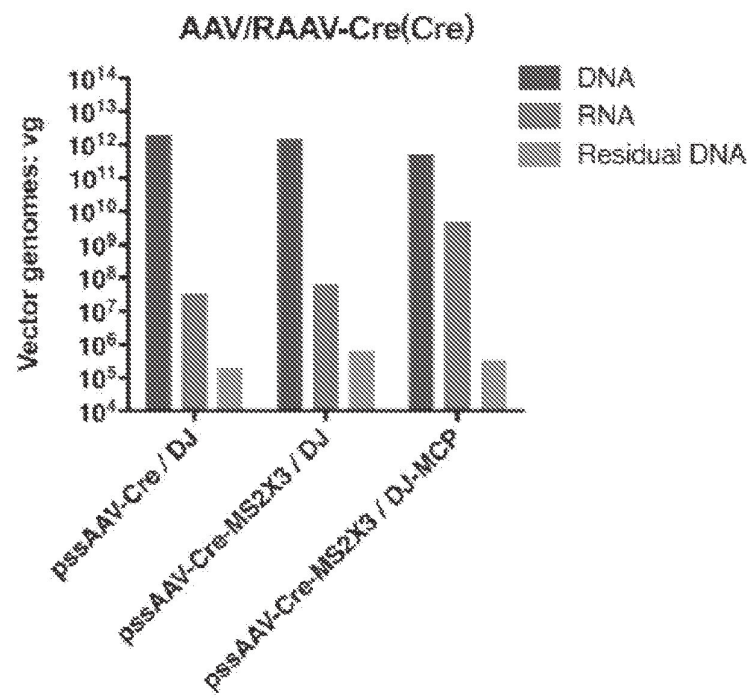


FIG. 12A

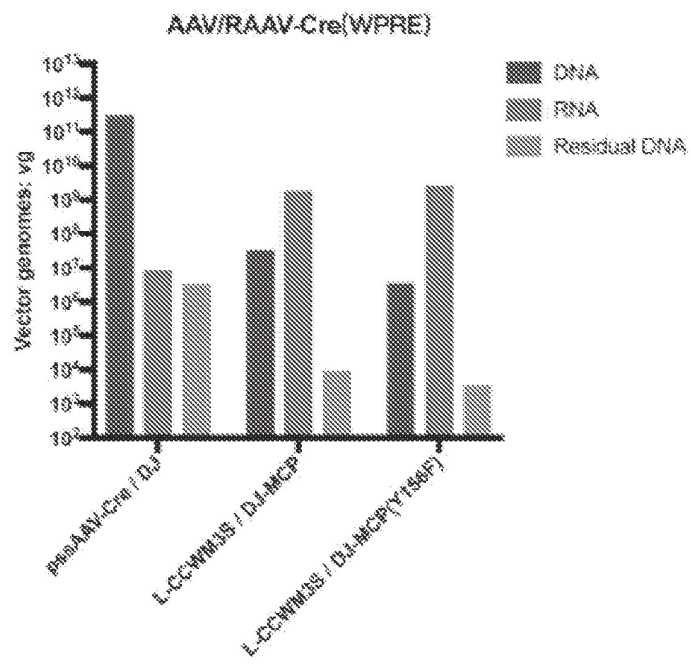


FIG. 12B

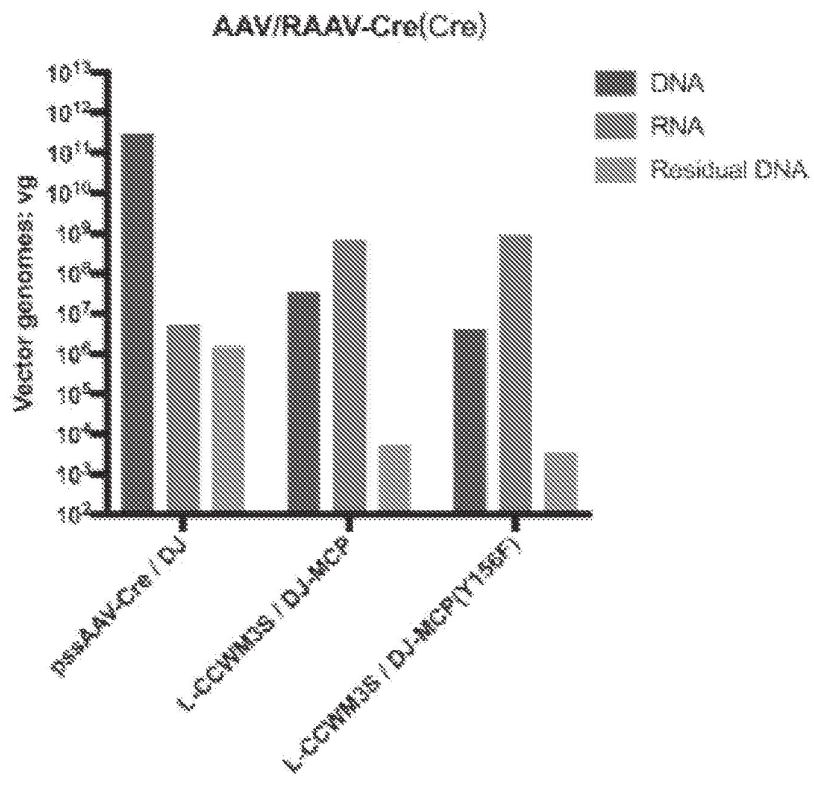


FIG. 12C

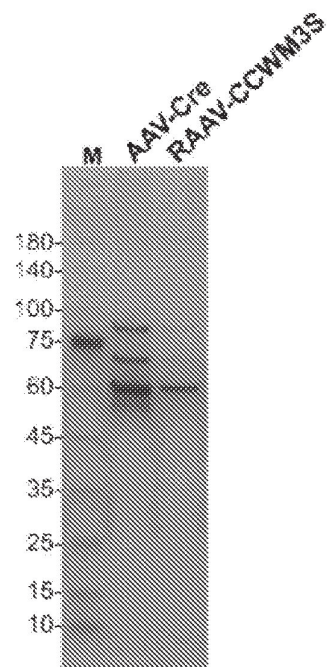


FIG. 12D

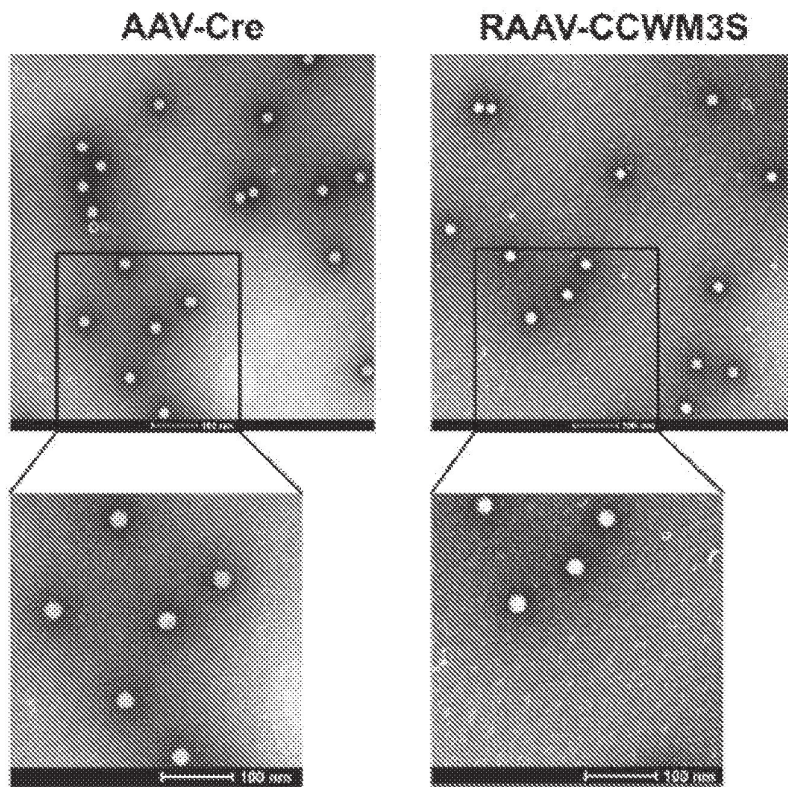


FIG. 13A

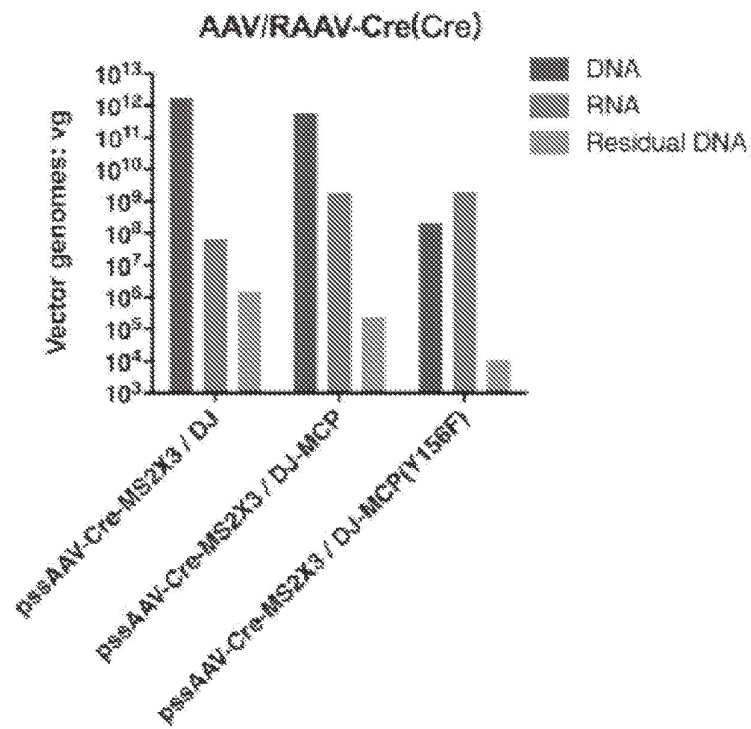


FIG. 13B

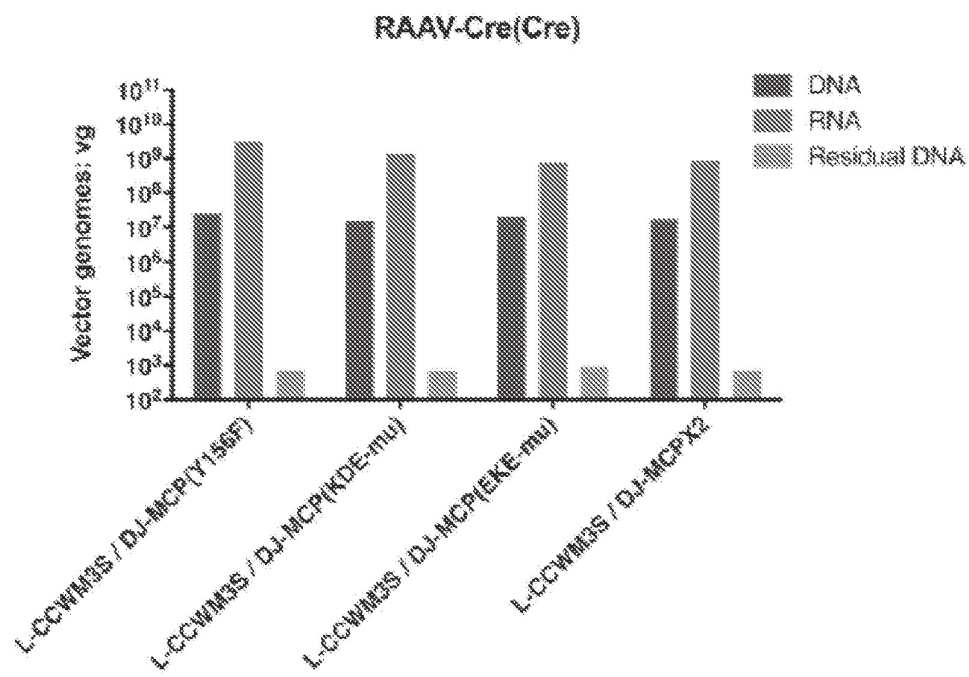


FIG. 14A

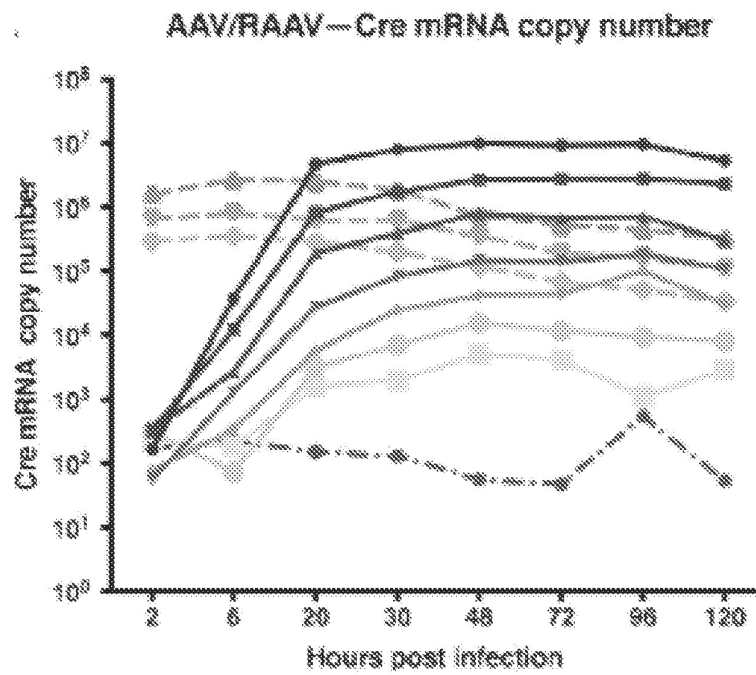


FIG. 14B

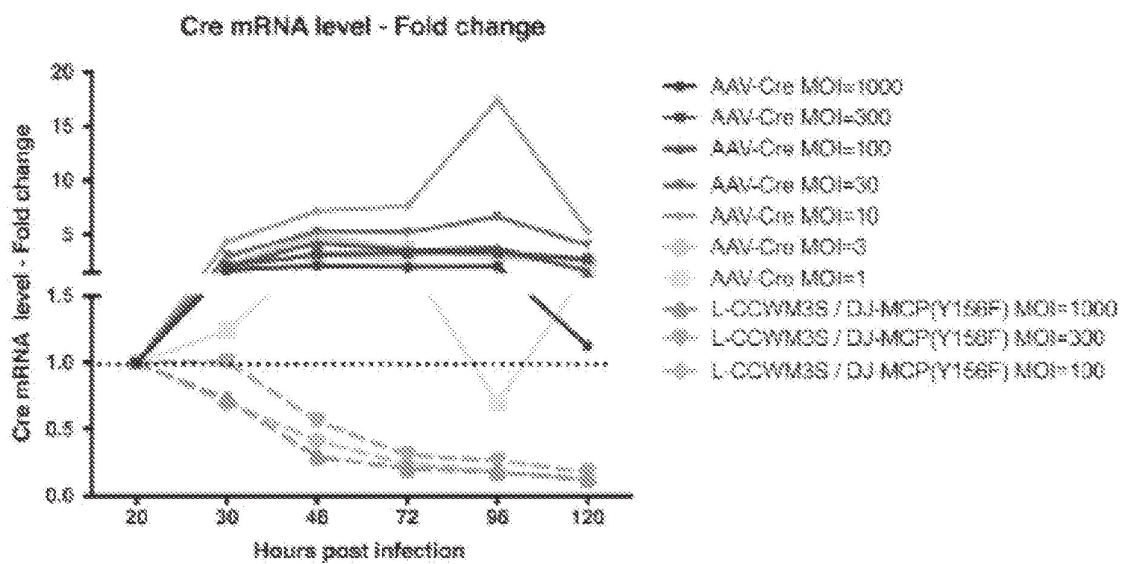


FIG. 14C

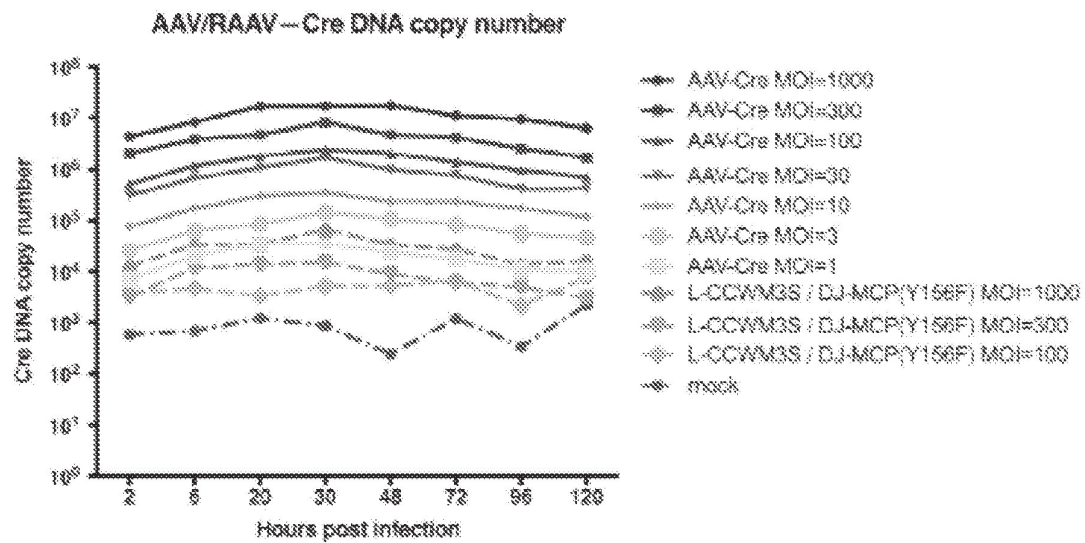


FIG. 14D

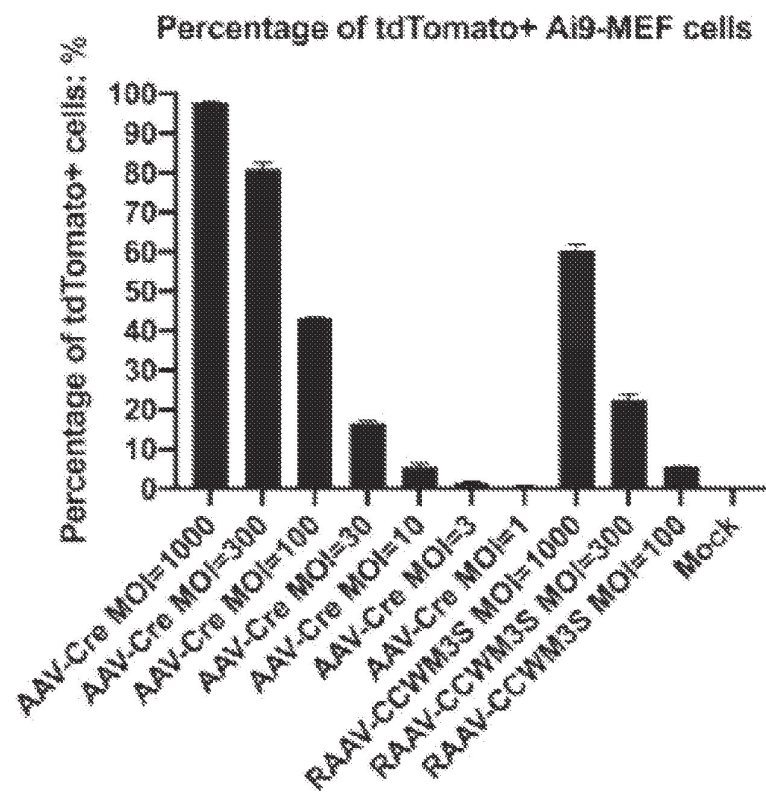


FIG. 15A

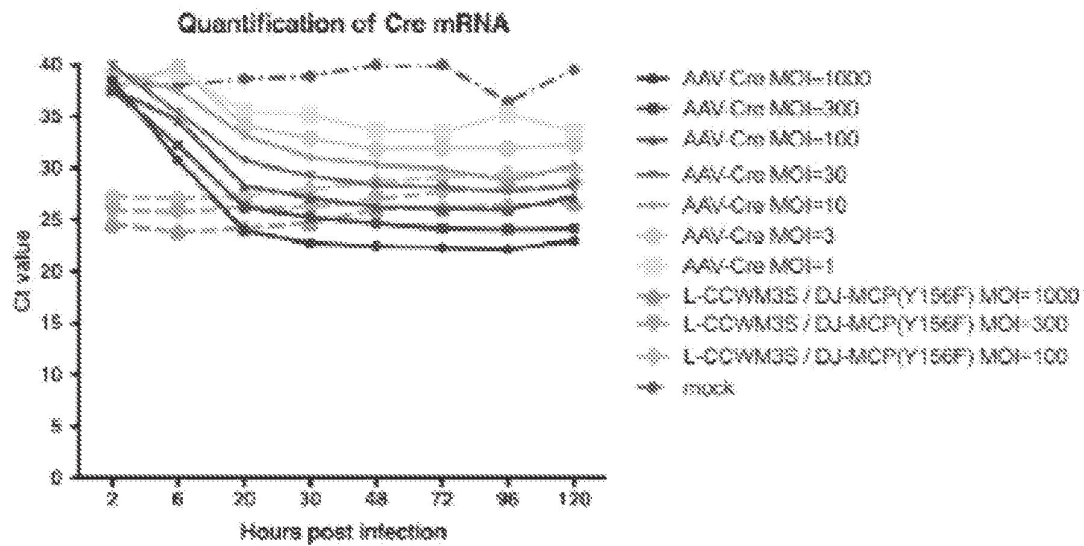


FIG. 15B

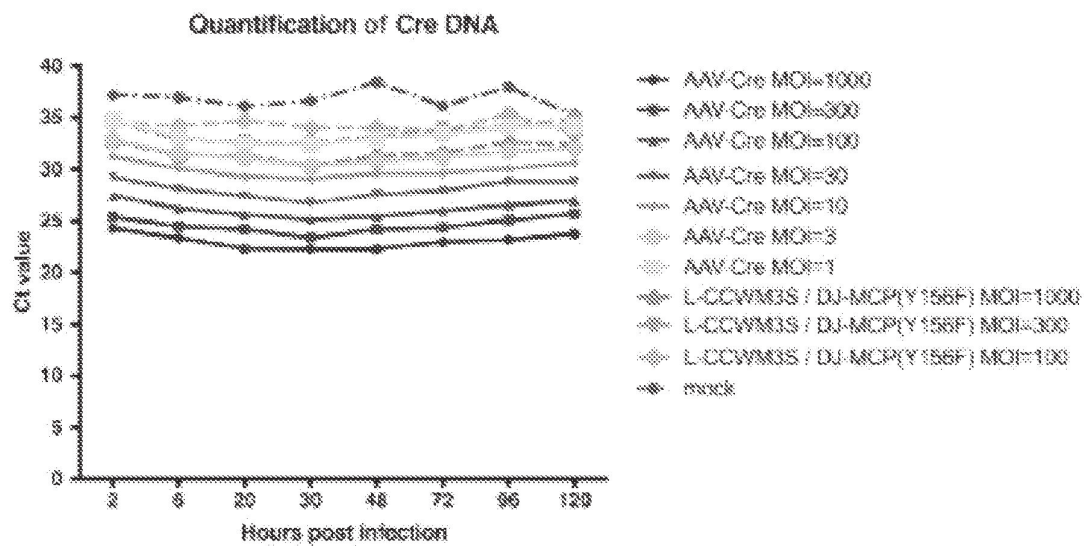


FIG. 15C

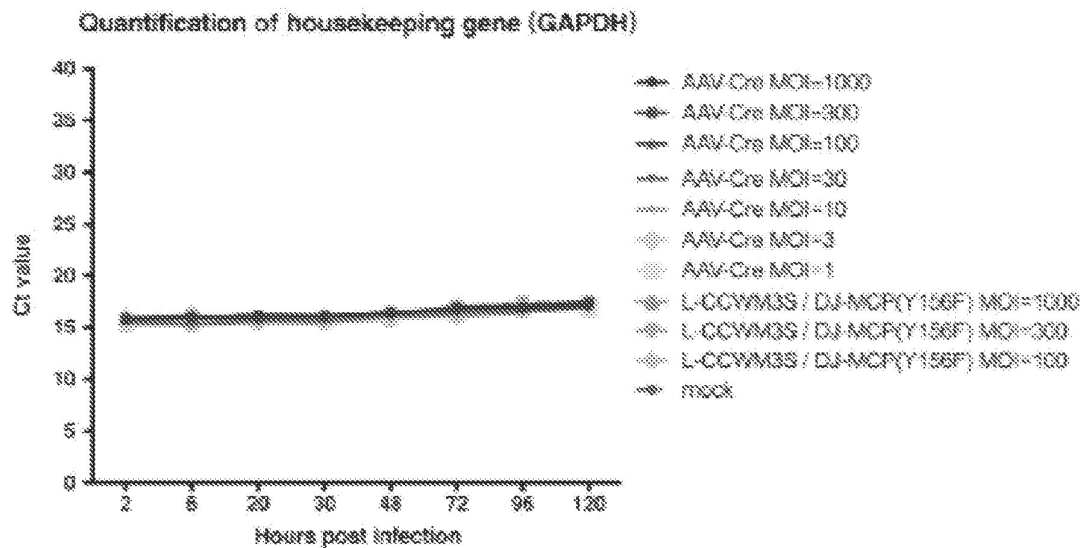


FIG. 15D

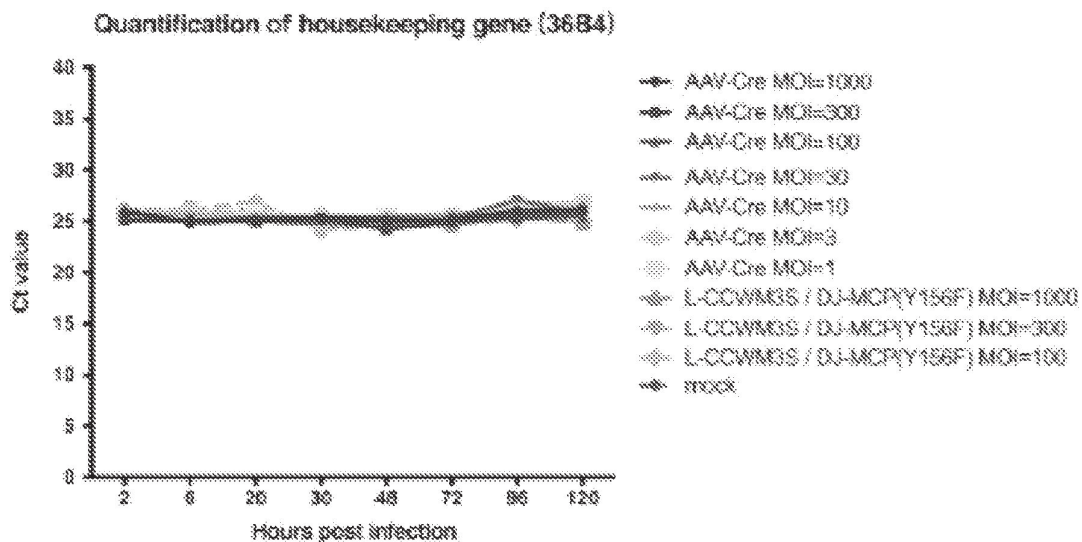


FIG. 16

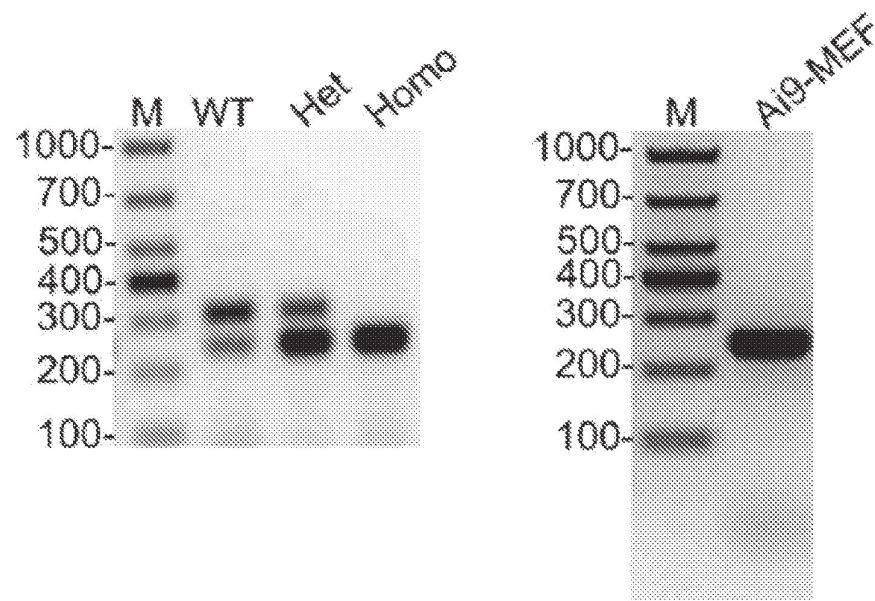


FIG. 17A

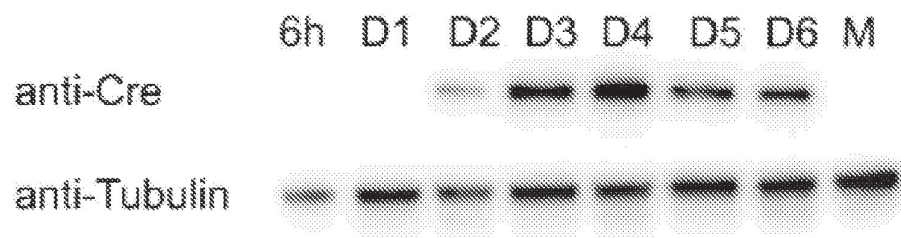


FIG. 17B

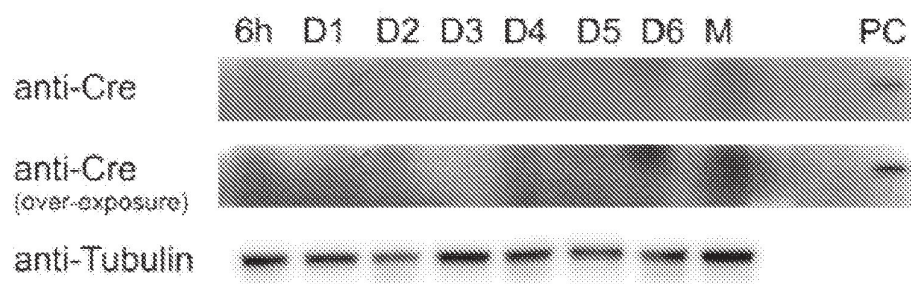


FIG. 18

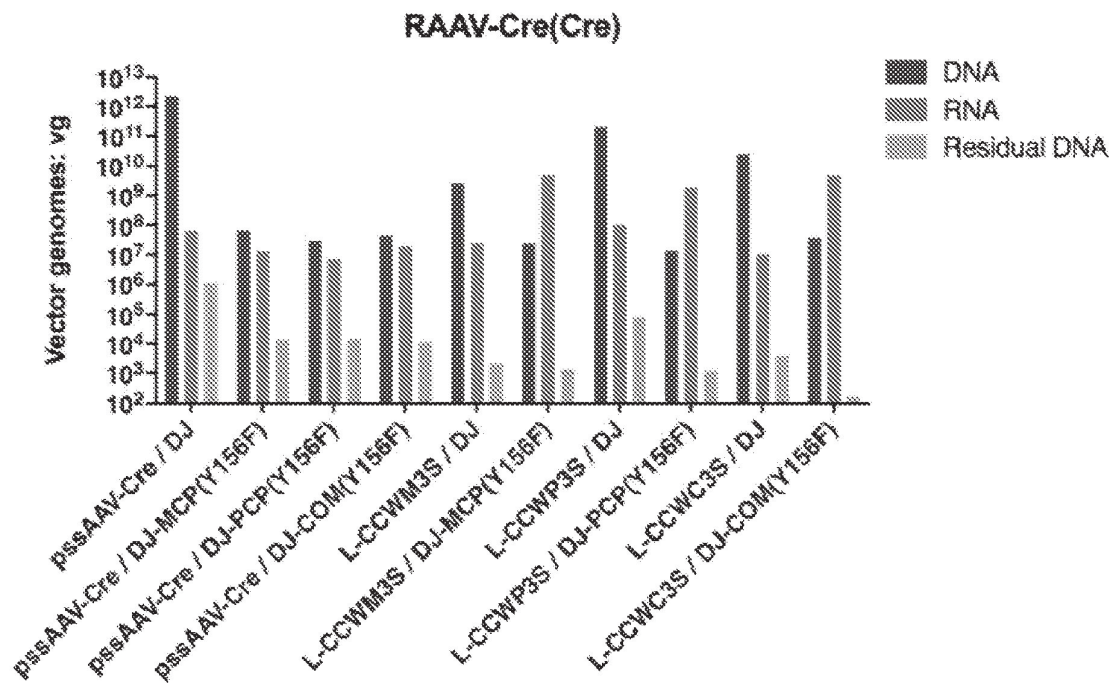


FIG. 19

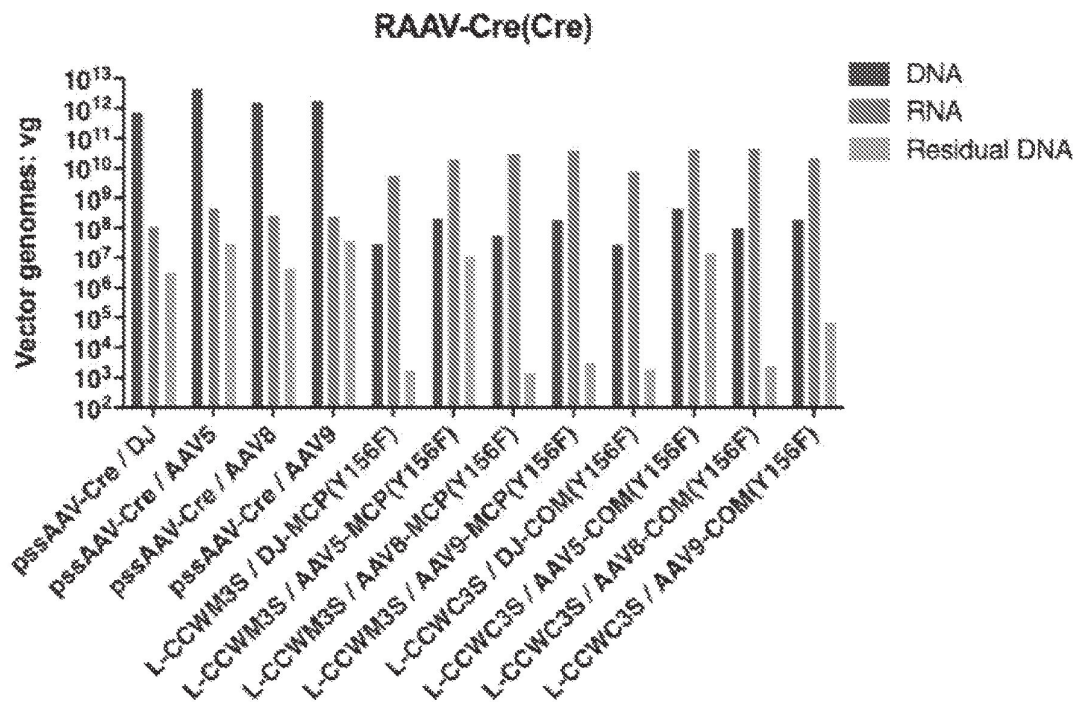


FIG. 20A
RAAV-Cre(Cre)

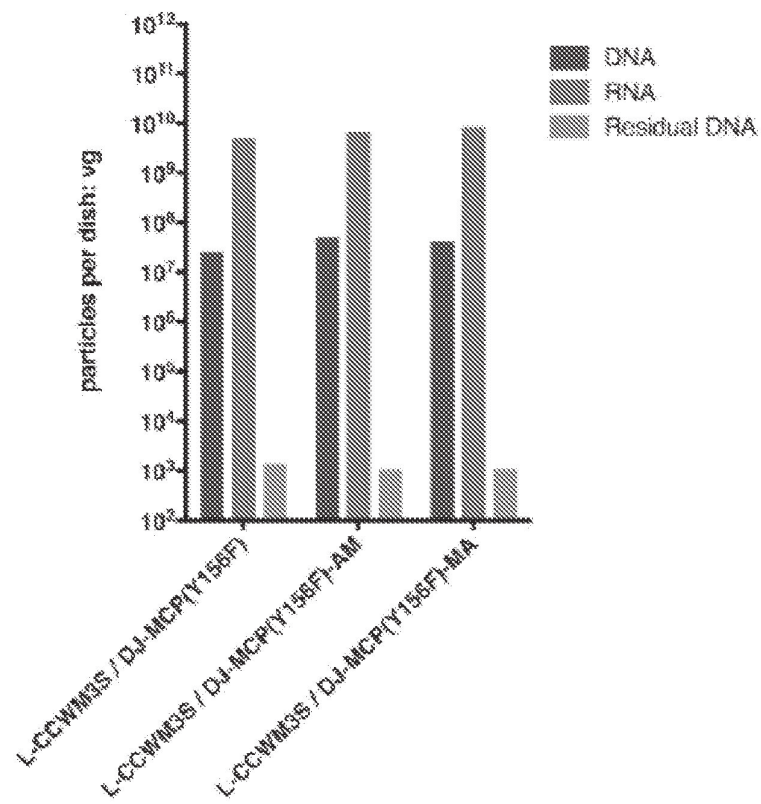


FIG. 20B

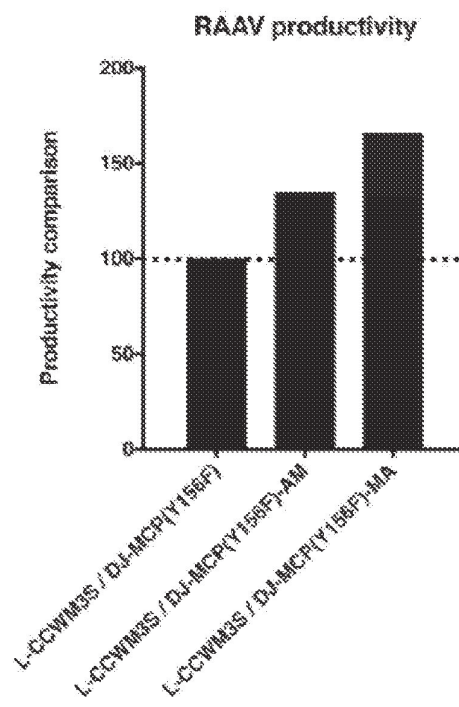


FIG. 21A

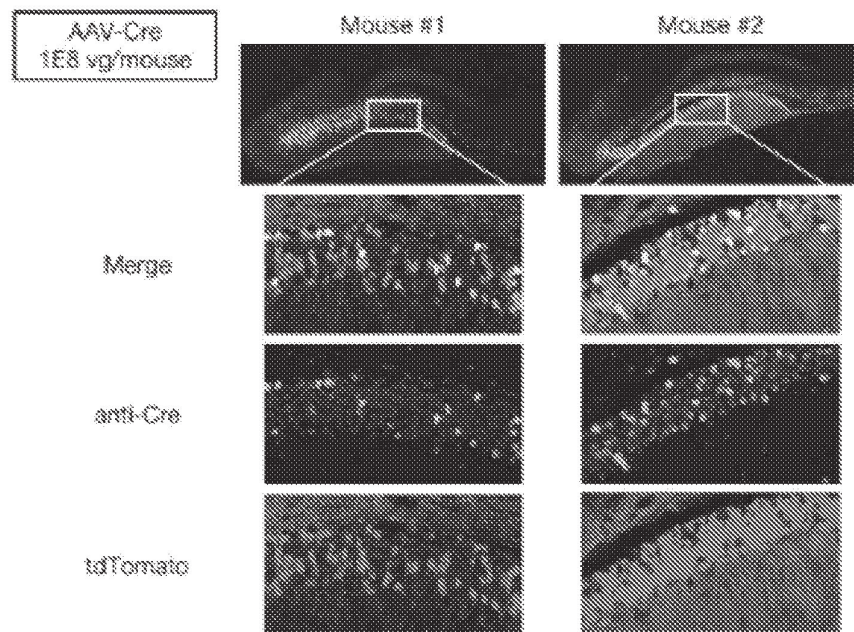


FIG. 21B

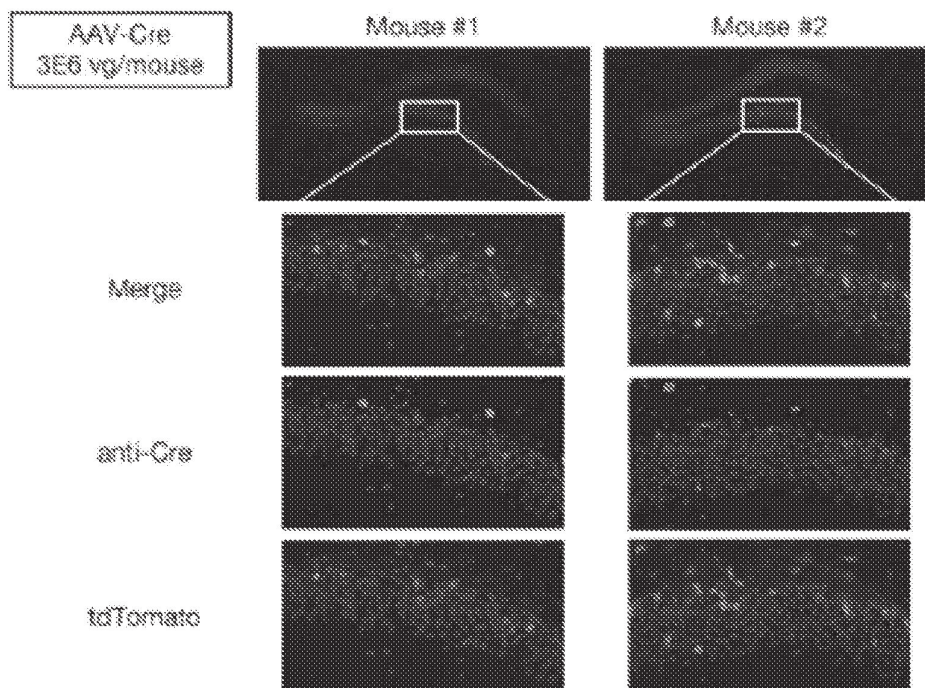


FIG. 21C

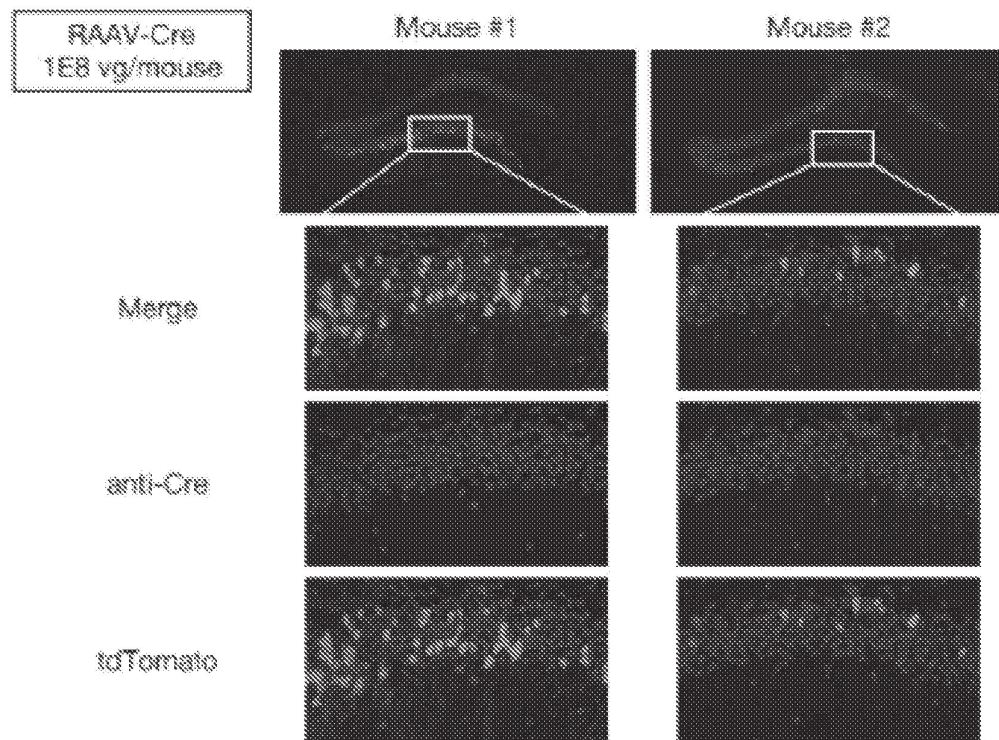


FIG. 21D

