

Fig. 1A

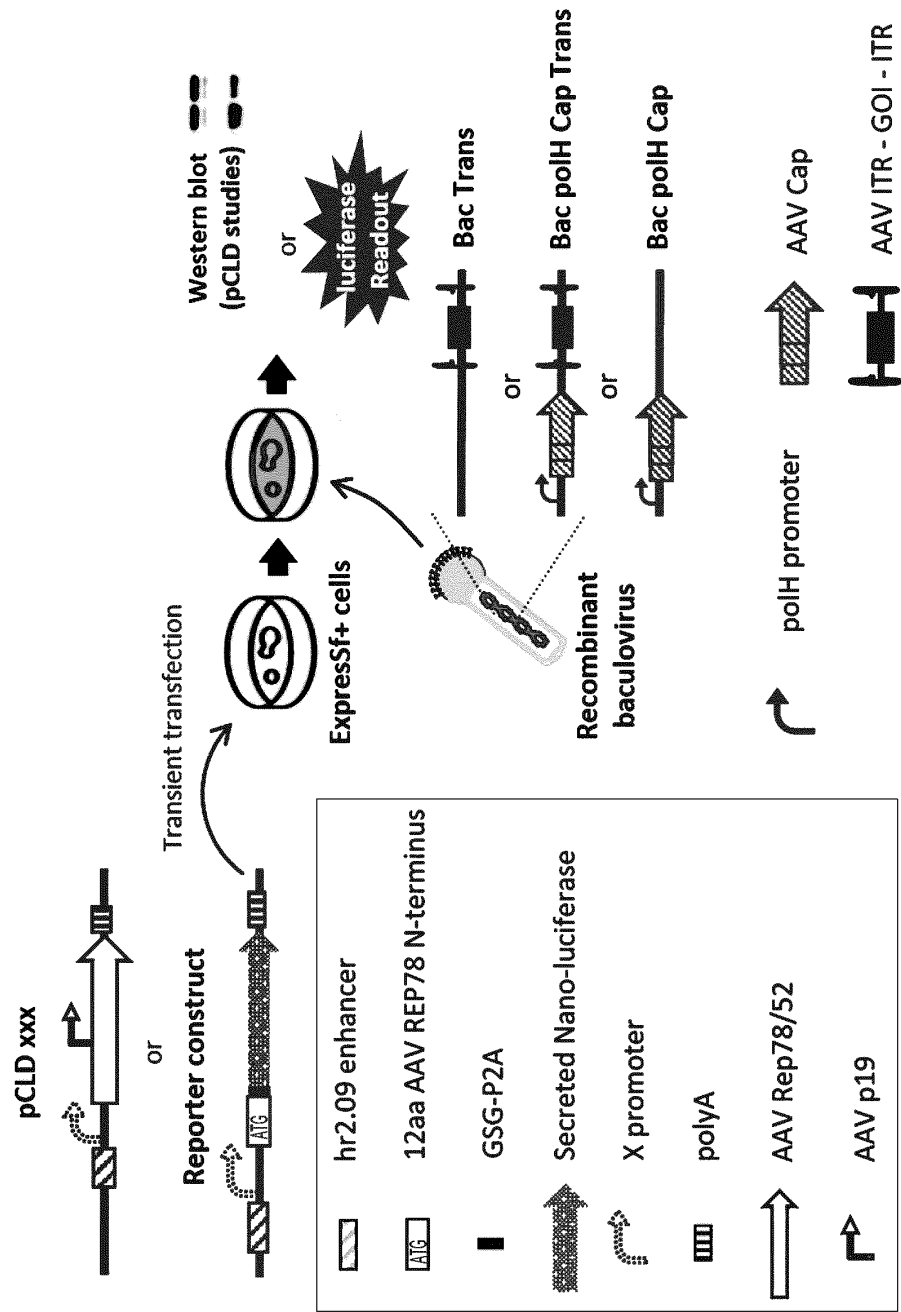


Fig. 1B

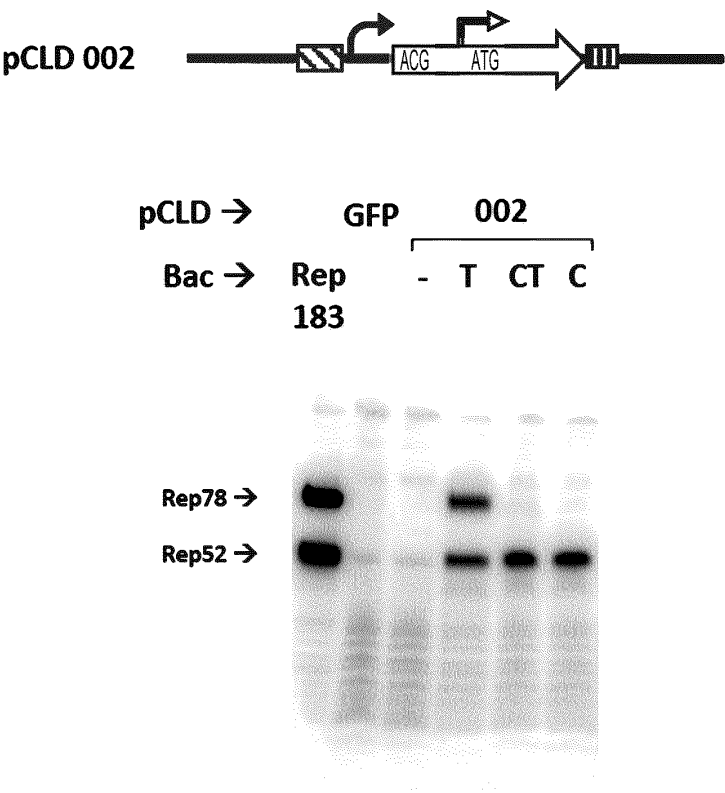


Fig. 1C

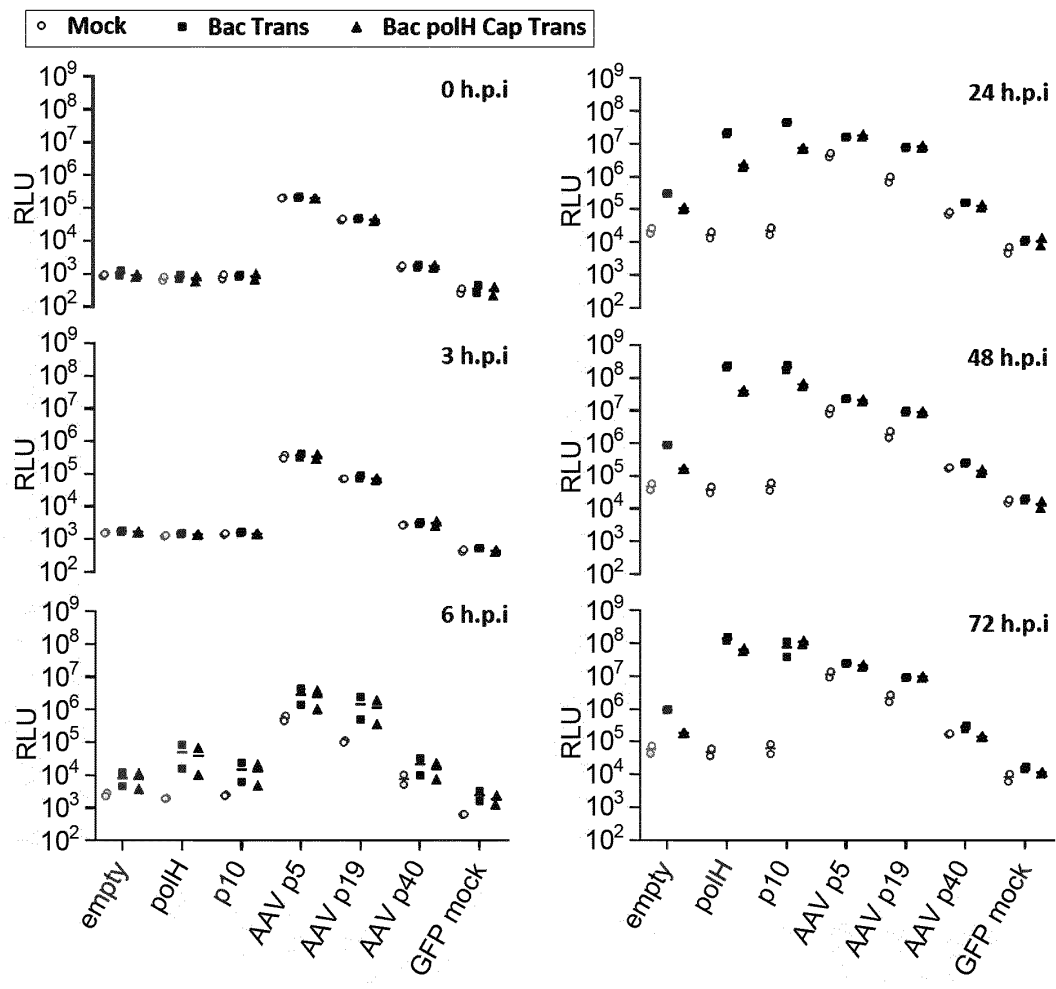


Fig. 2A

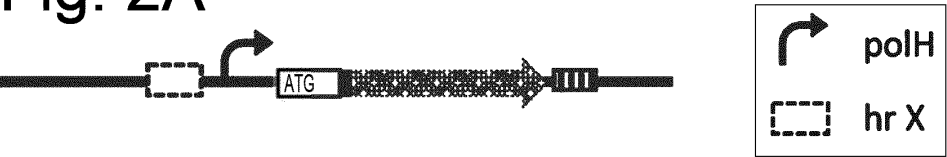


Fig. 2B

Number of IE-1 binding site (CNNGTAGAATTCTACNNG)		1	2	3	4	5	6	7
4	hr1							
7	hr2	20.45						
7	hr2.09	21.71	64.26					
8	hr3	38.65	29.00	26.98				
4	hr4b	5.24	18.77	16.44	3.85			
6	hr5	41.53	27.40	34.03	30.94	6.12		
8	Synthetic hr	48.53	28.08	33.45	65.48	3.91	51.55	

Fig. 2C

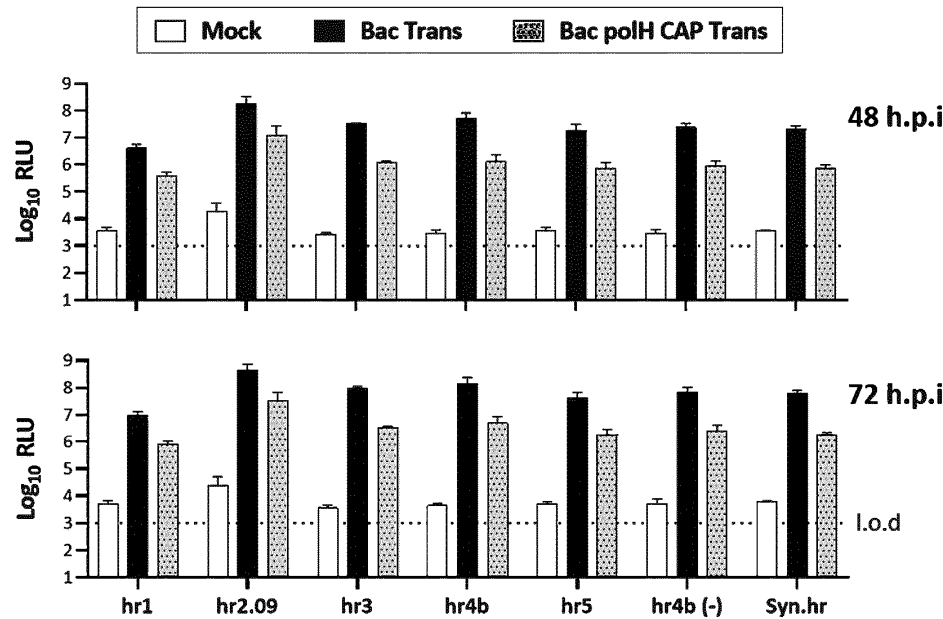


Fig. 2D

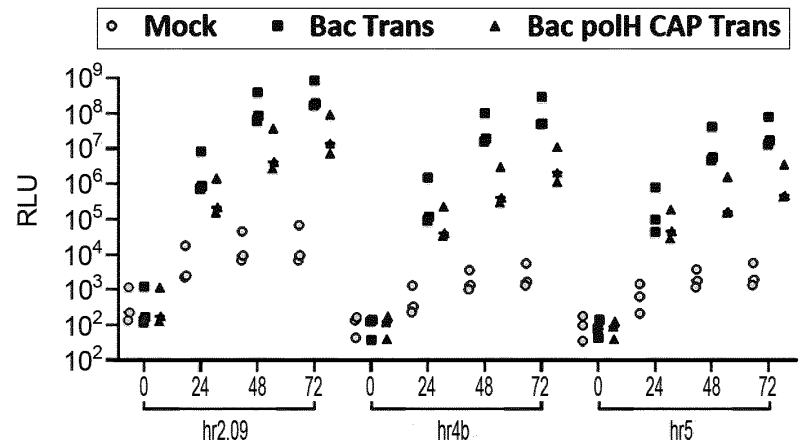


Fig. 2E

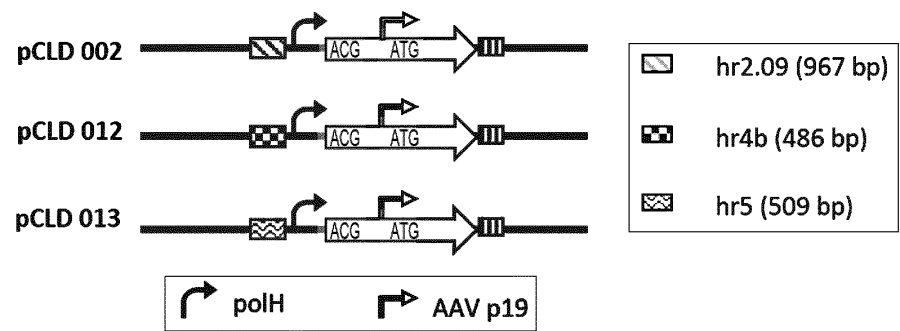


Fig. 2F

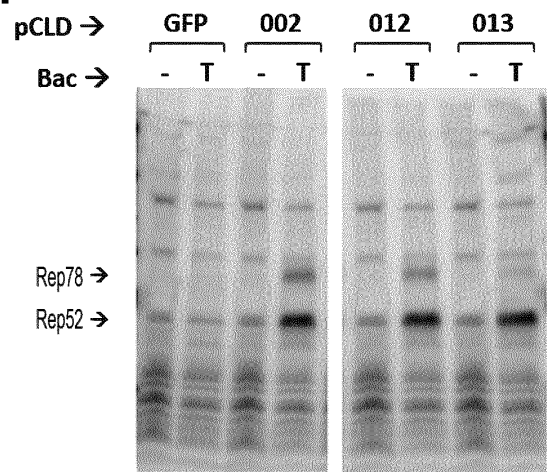


Fig. 3A

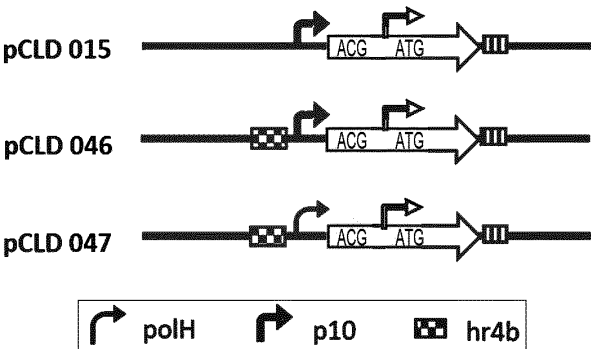


Fig. 3B

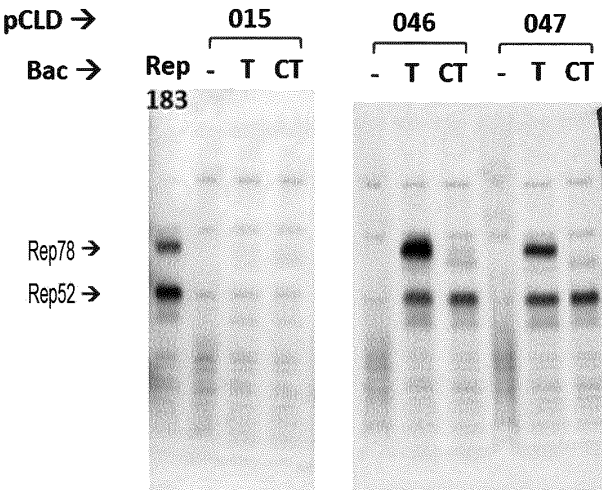


Fig. 4A

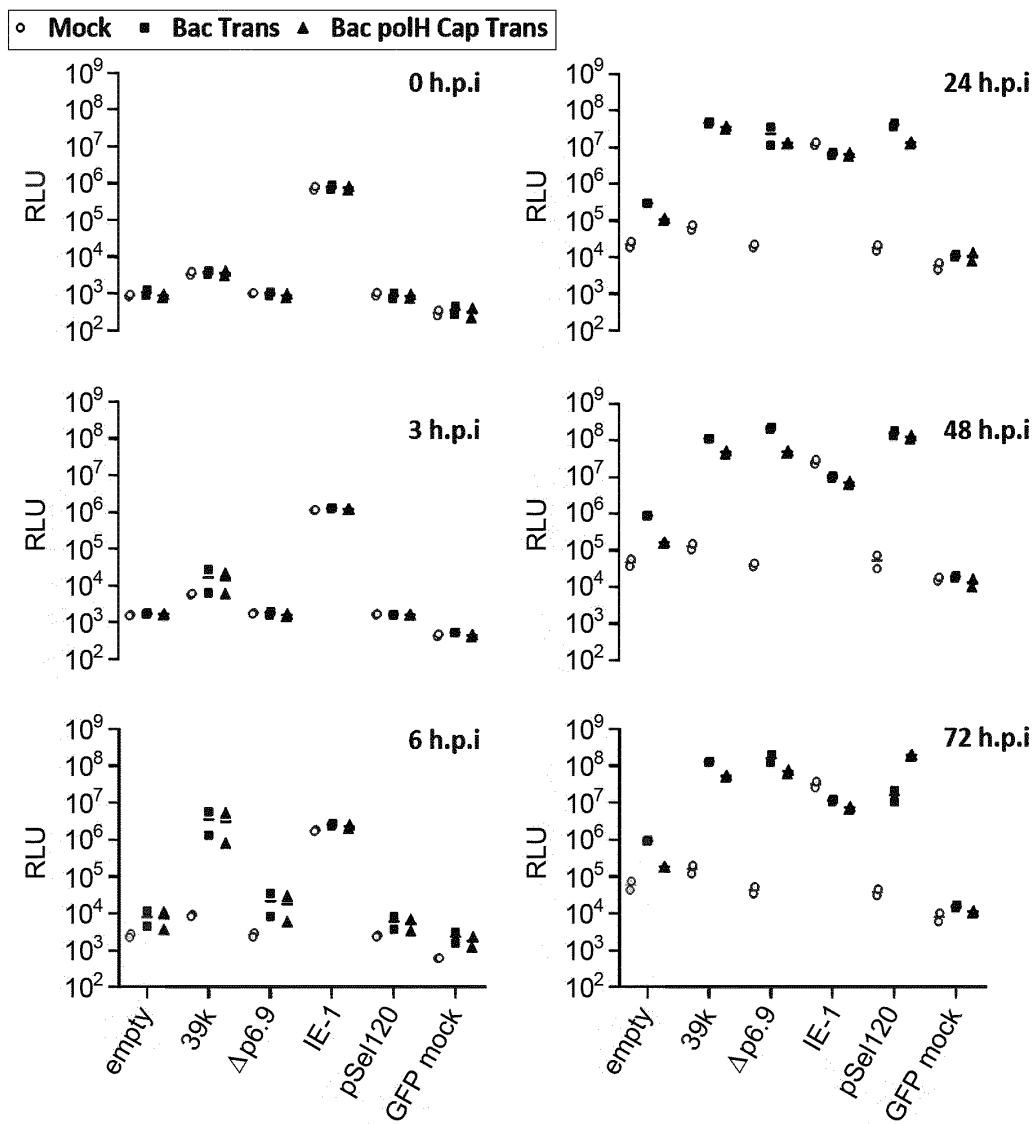


Fig. 4B

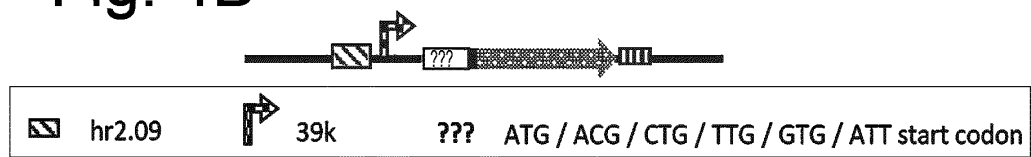


Fig. 4C

8/31

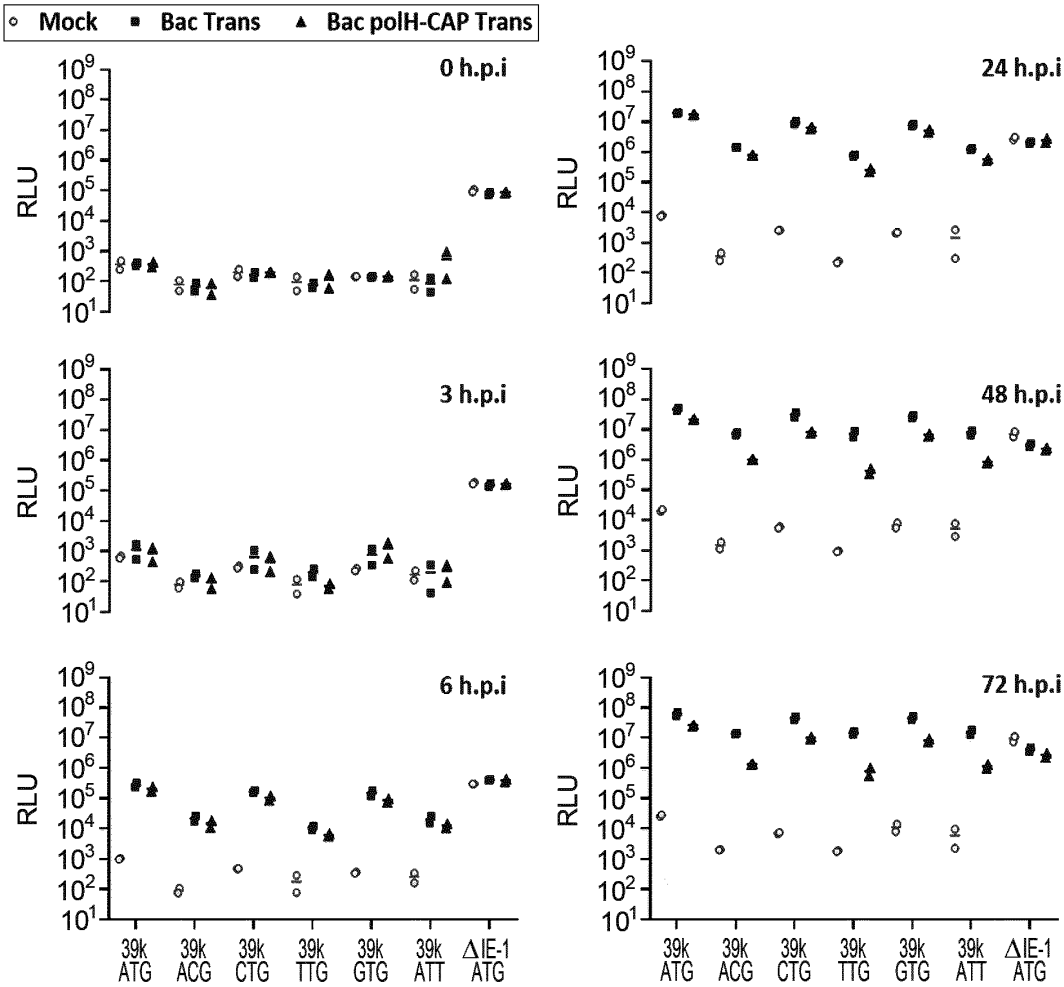


Fig. 4D

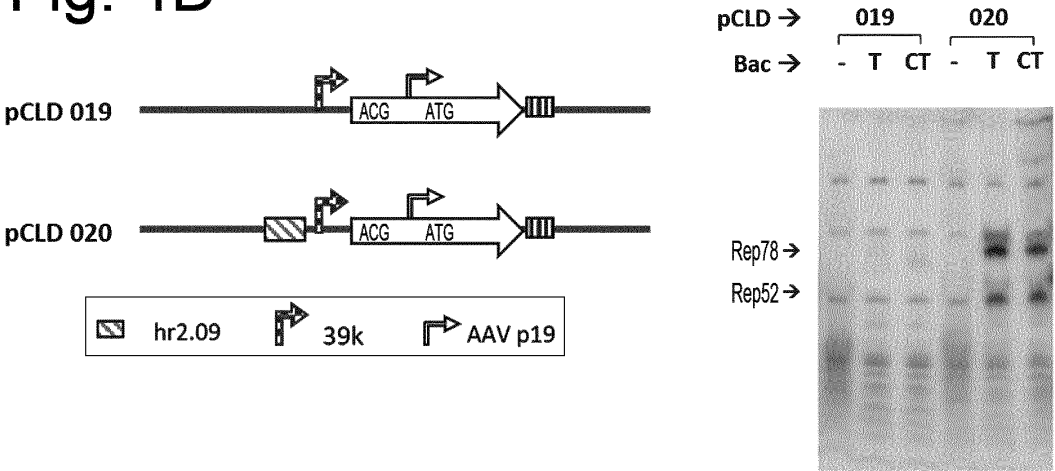


Fig. 4E

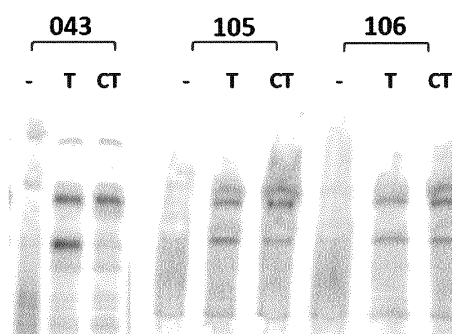
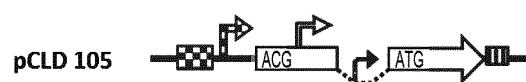
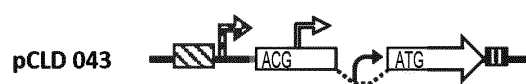
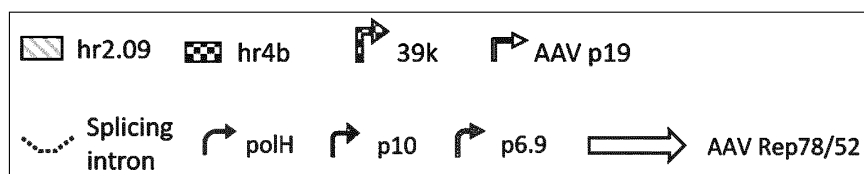


Fig. 5A

		1	2	3
WT AAV2 Rep52	1			
AAV2 REP183 Rep52	2	88.27		
Extreme codon opt AAV2 Rep52	3	66.92	70.52	

Fig. 5B

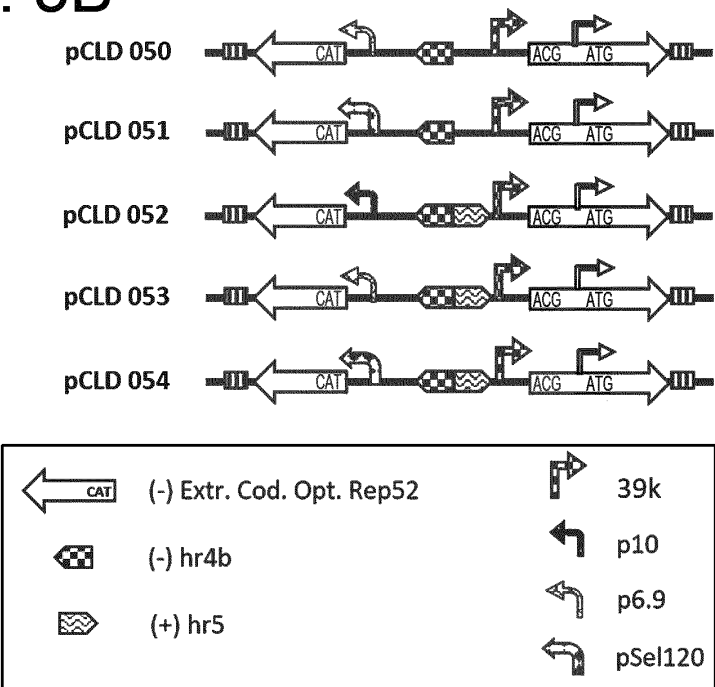


Fig. 5C

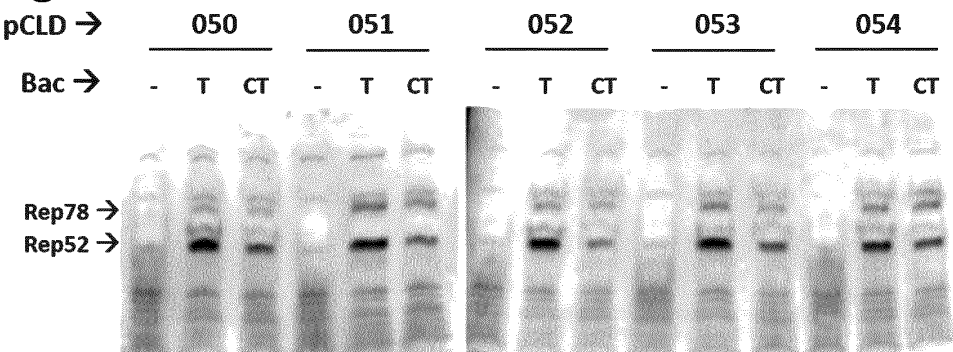


Fig. 6A

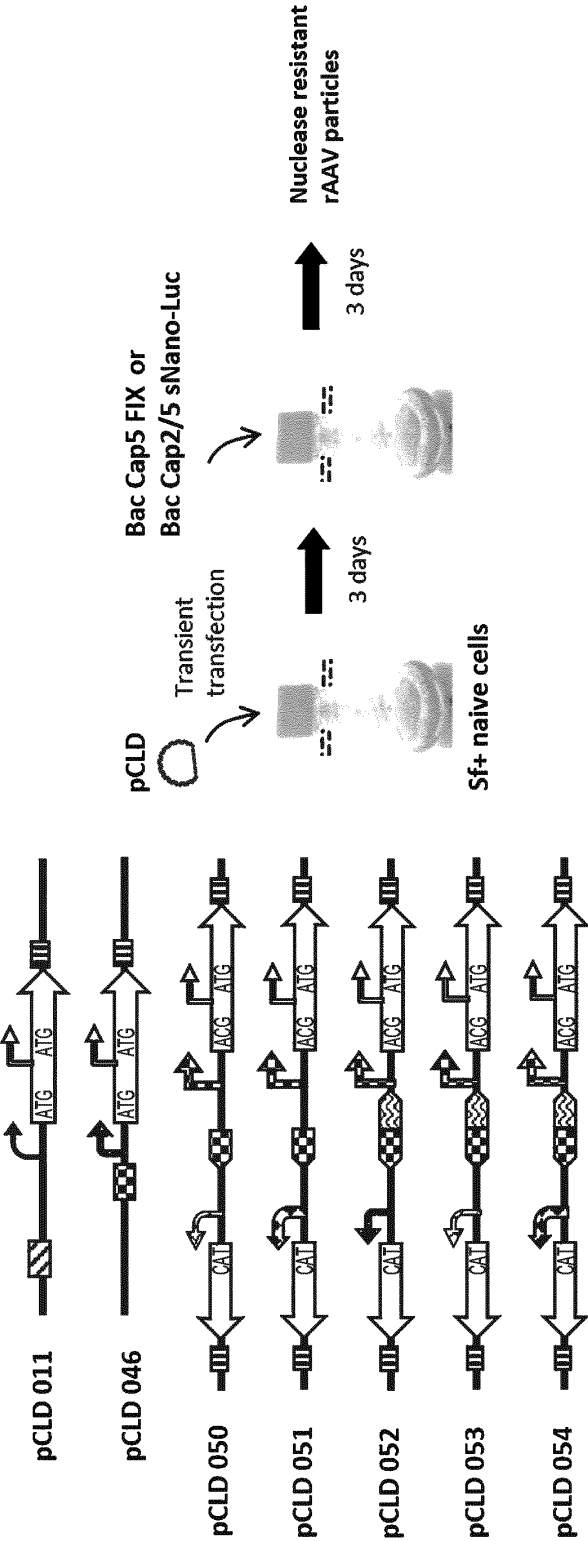


Fig. 6B

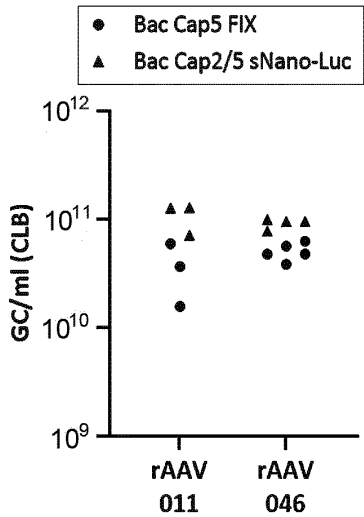


Fig. 6C

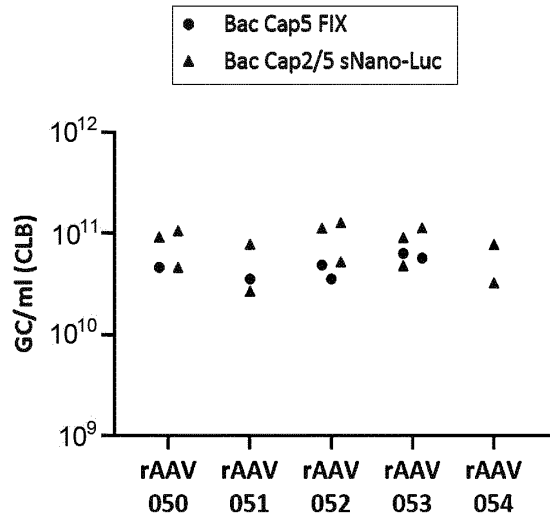


Fig. 6E

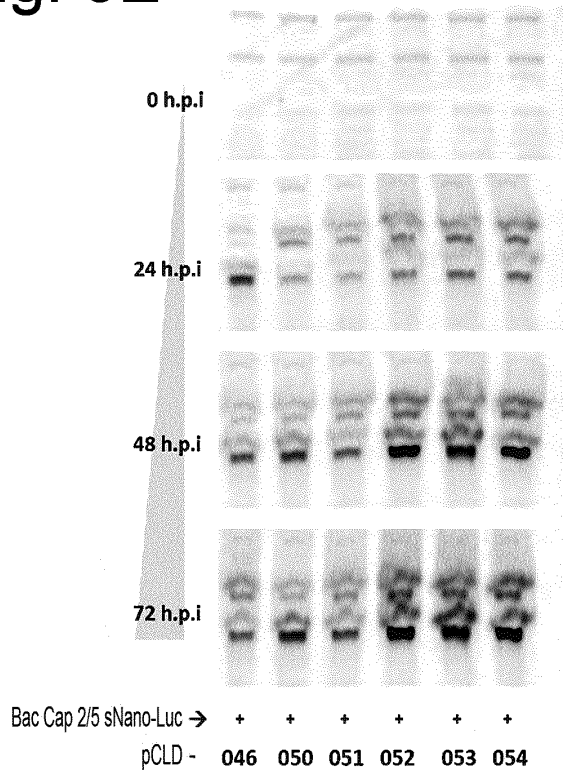


Fig. 6D

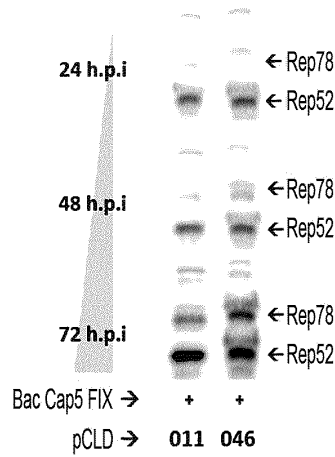


Fig. 7A

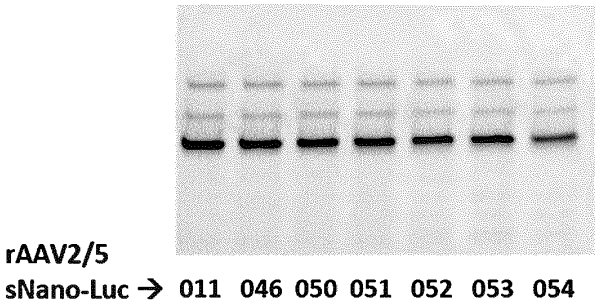


Fig. 7B

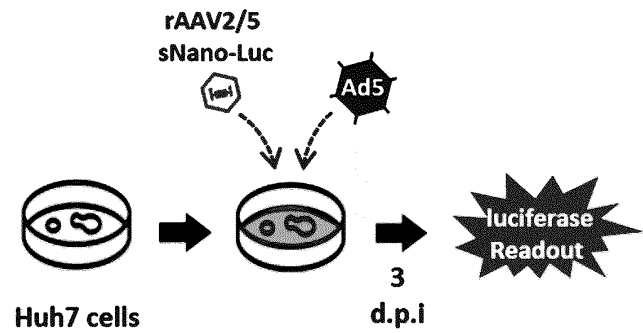


Fig. 7C

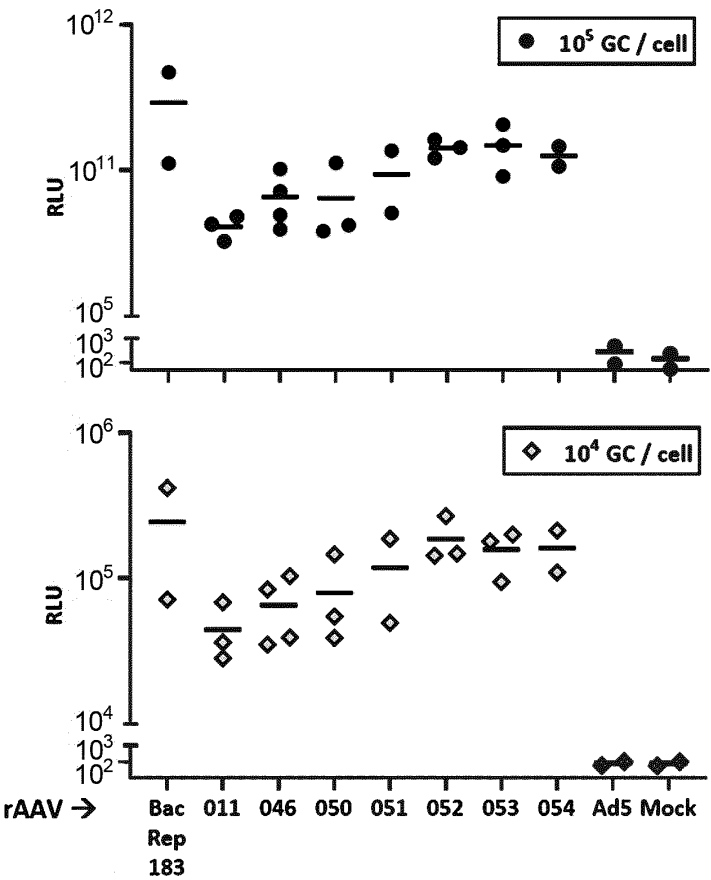


Fig. 8A

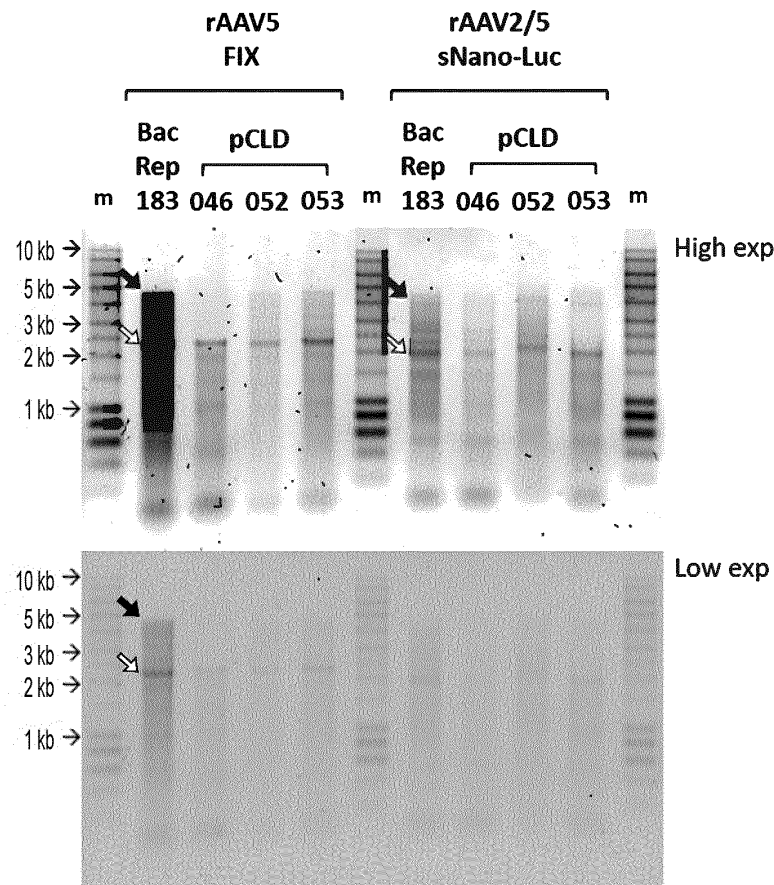


Fig. 8B

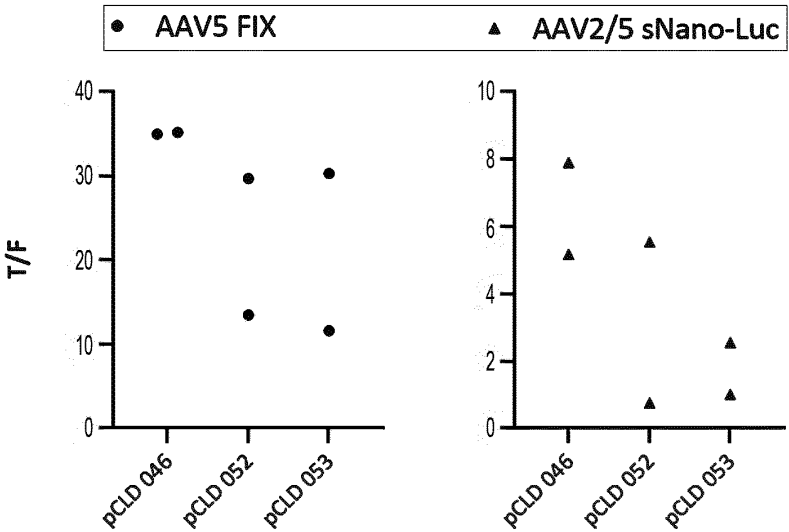


Fig. 9A

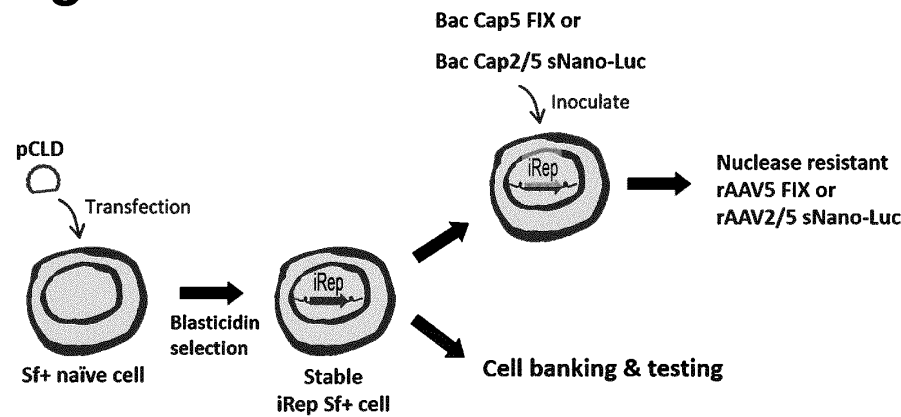


Fig. 9B

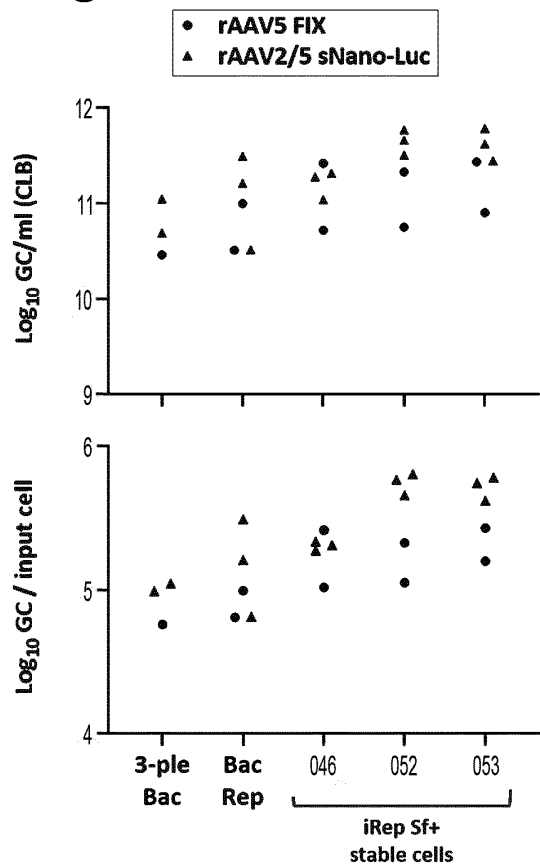


Fig. 9C

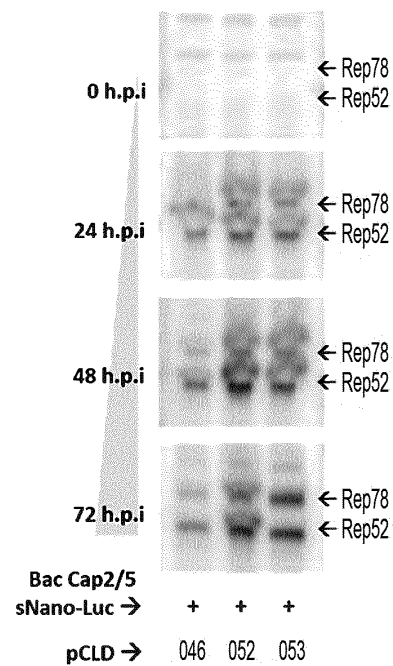


Fig. 10B

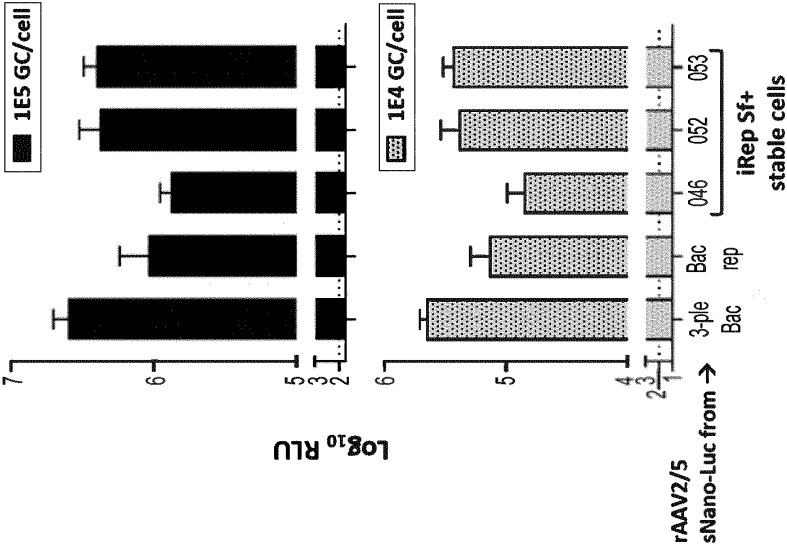


Fig. 10A

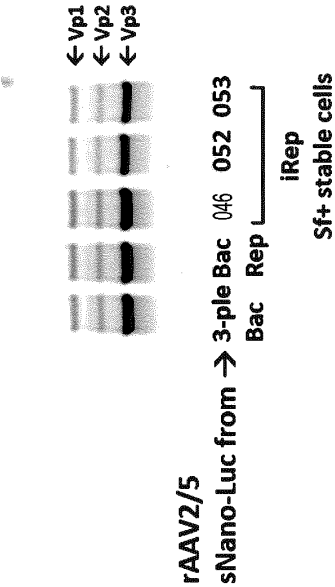


Fig. 11A

Description	Product	Source of Rep expression	Source of Cap expression	Source of Transgene
BBNE 1	AAV5 FIX	Bac Rep183	Bac Cap5	Bac FIX
BBNE 2	AAV5 FIX	DuoBac Rep183Cap5	DuoBac Rep183Cap5	Bac FIX
BBNE 3	AAV5 FIX	iRep 046	Bac Cap5 FIX	Bac Cap5 FIX
BBNE 4	AAV5 FIX	iRep 046	Bac Cap5	Bac FIX
BBNE 5	AAV5 FIX	iRep 052	Bac Cap5 FIX	Bac Cap5 FIX
BBNE 6	AAV5 FIX	iRep 052	Bac Cap5	Bac FIX
BBNE 7	AAV5 FIX	iRep 053	Bac Cap5 FIX	Bac Cap5 FIX
BBNE 8	AAV5 FIX	iRep 053	Bac Cap5	Bac FIX

Fig. 11B

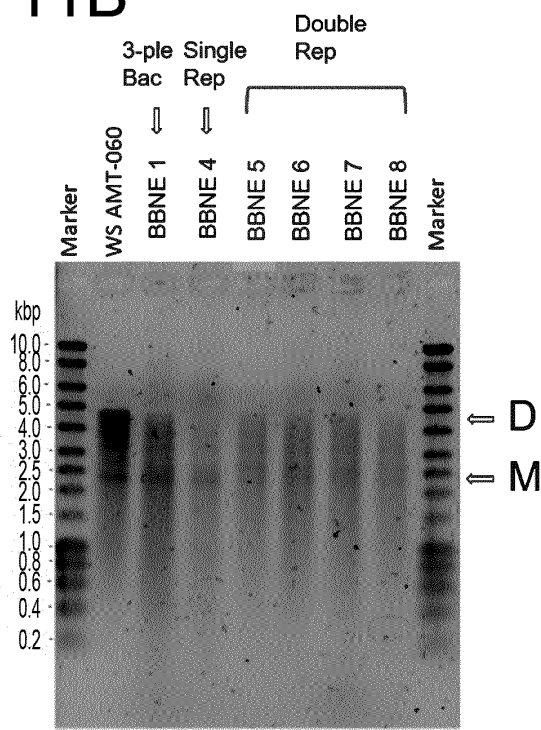


Fig. 11C

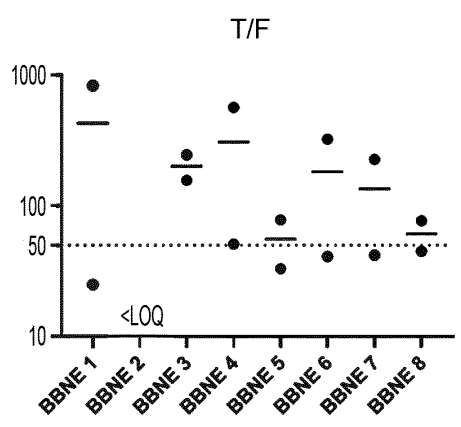


Fig. 11D

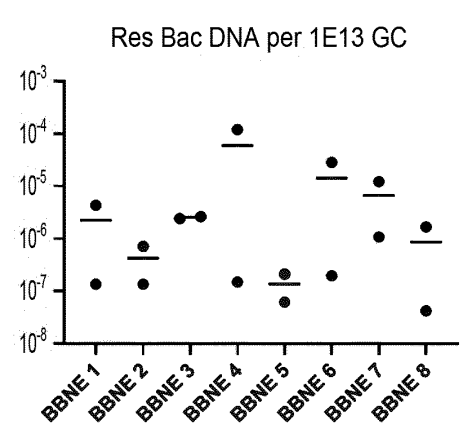


Fig. 12A

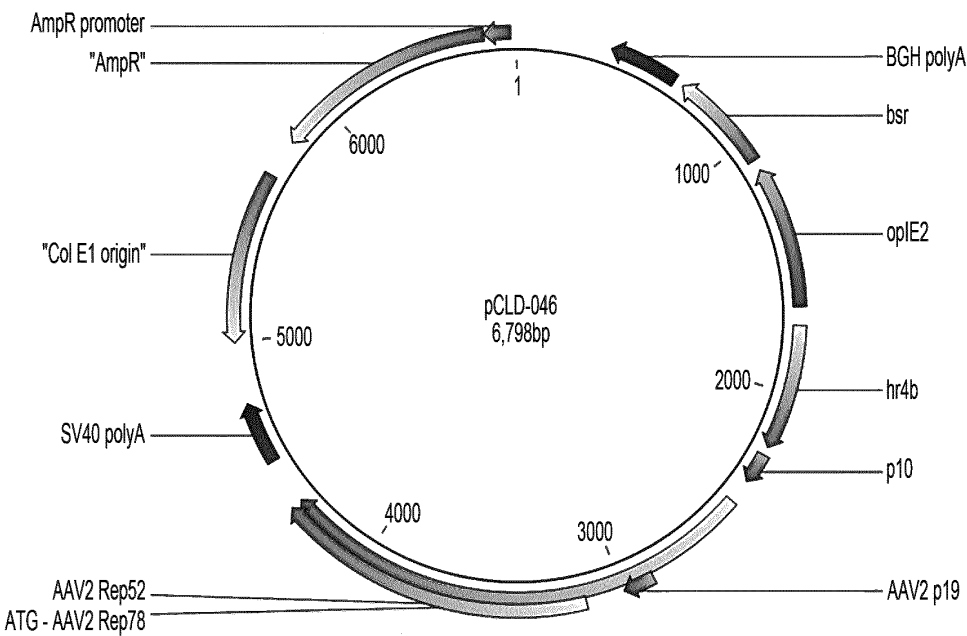


Fig. 12B

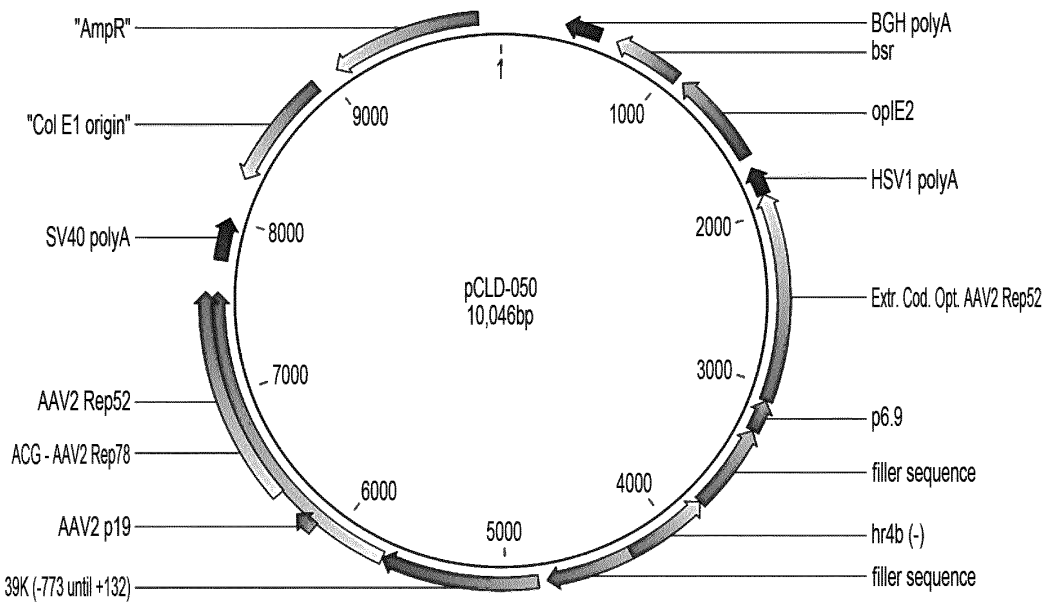


Fig. 12C

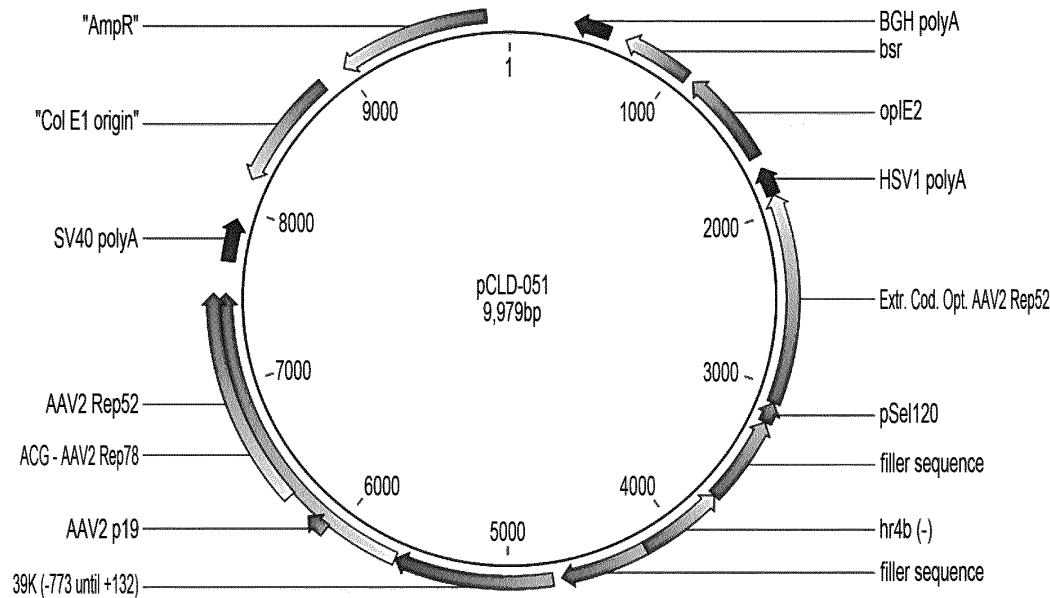


Fig. 12D

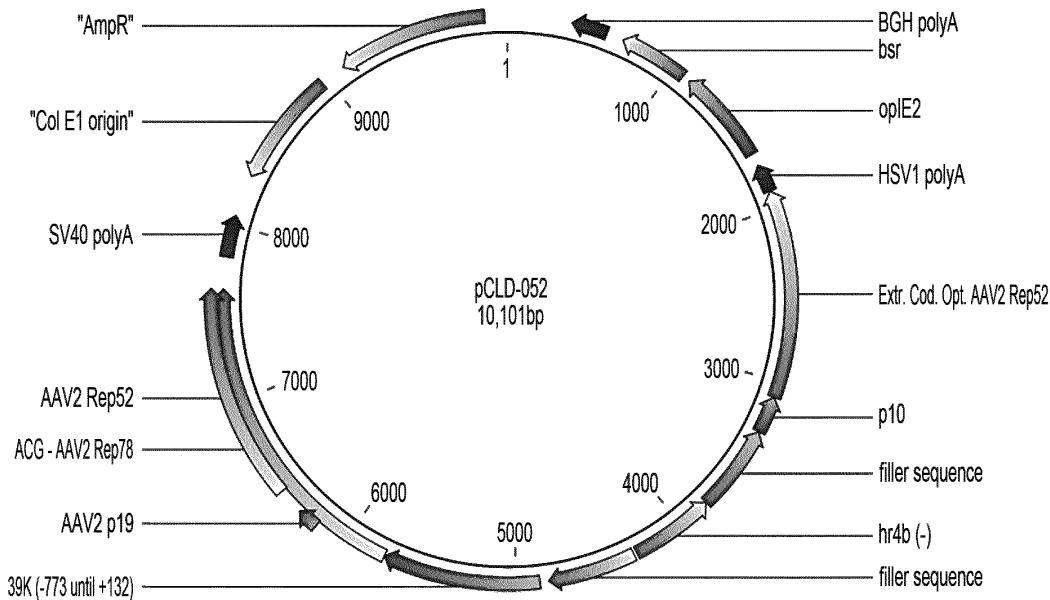


Fig. 12E

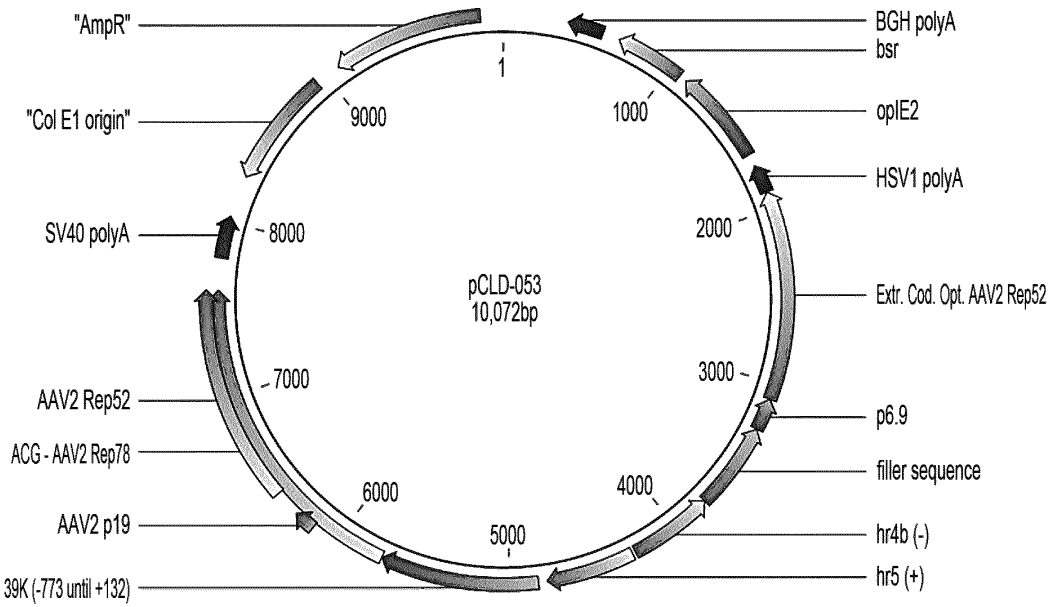


Fig. 12F

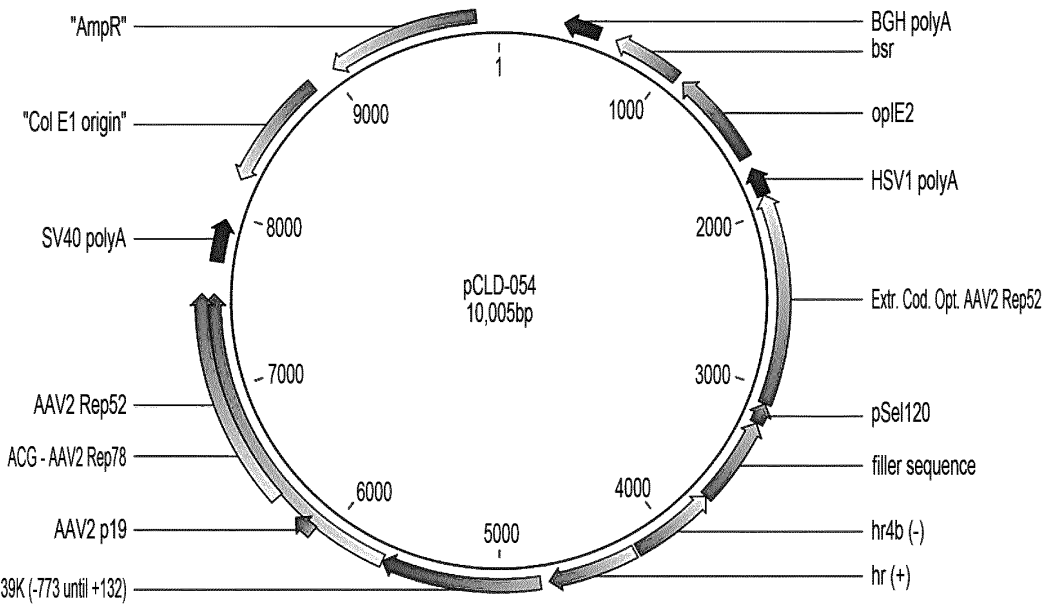
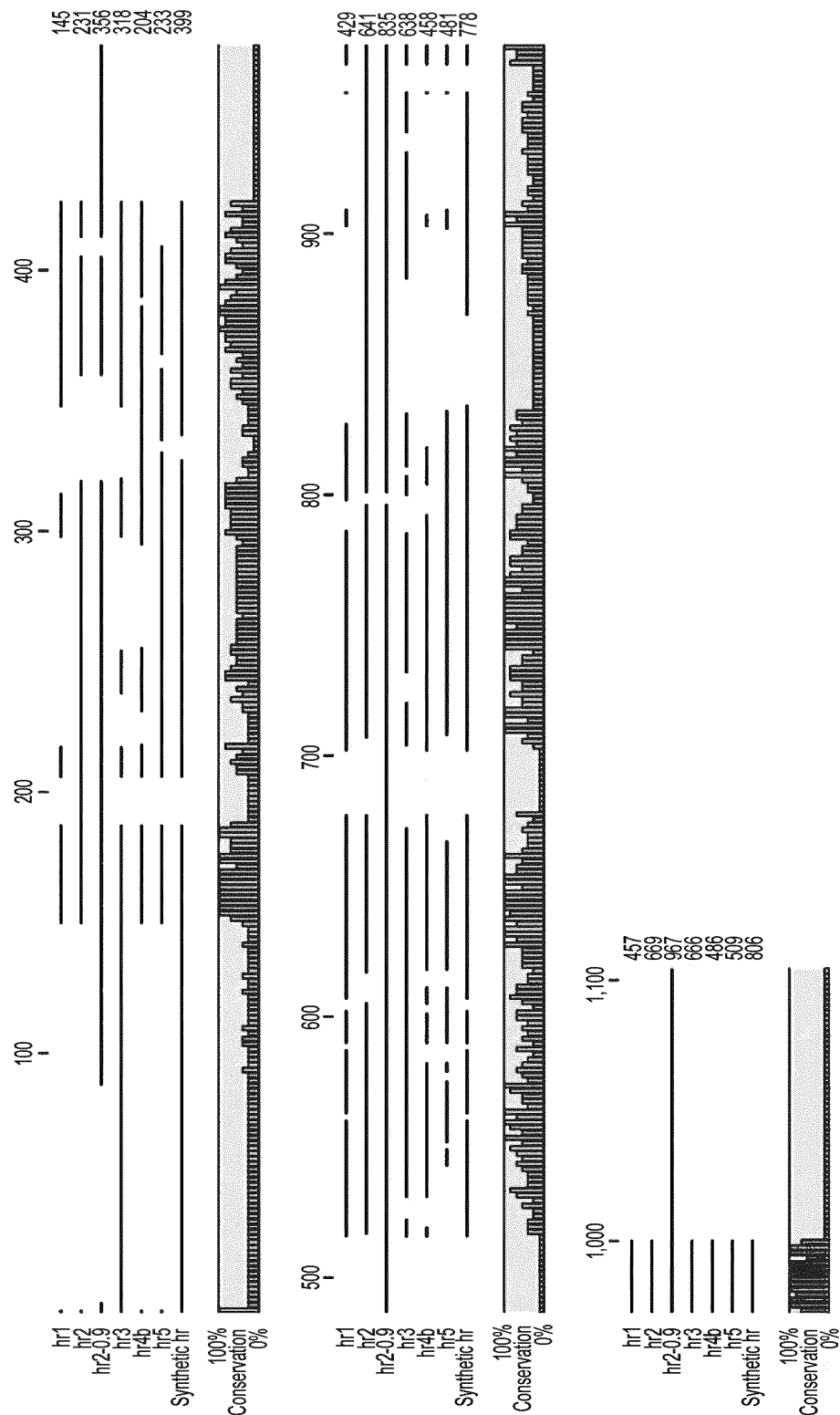


Fig. 13



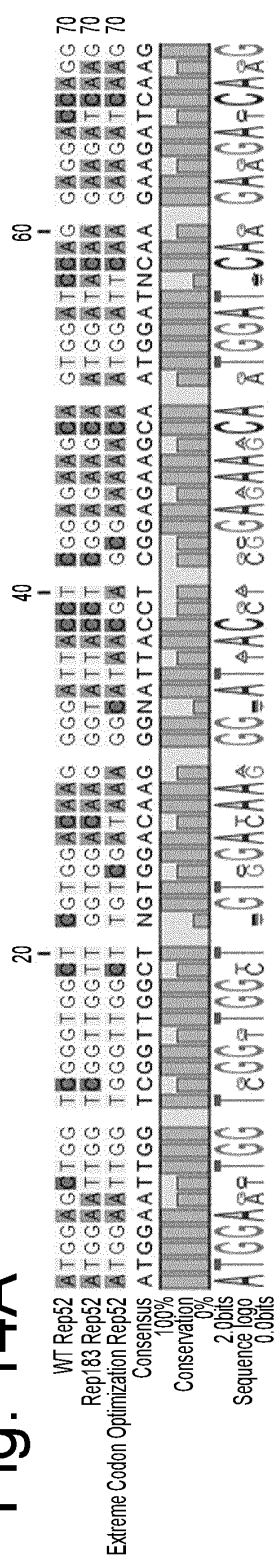


Fig. 14B

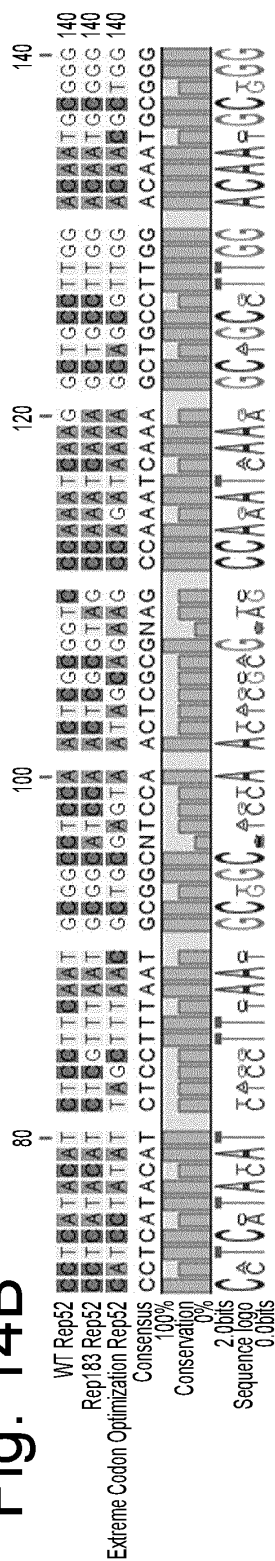
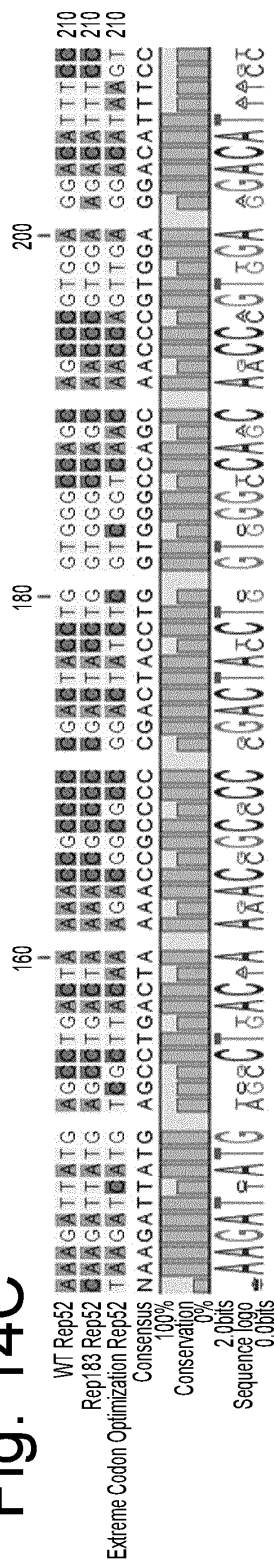


Fig. 14C



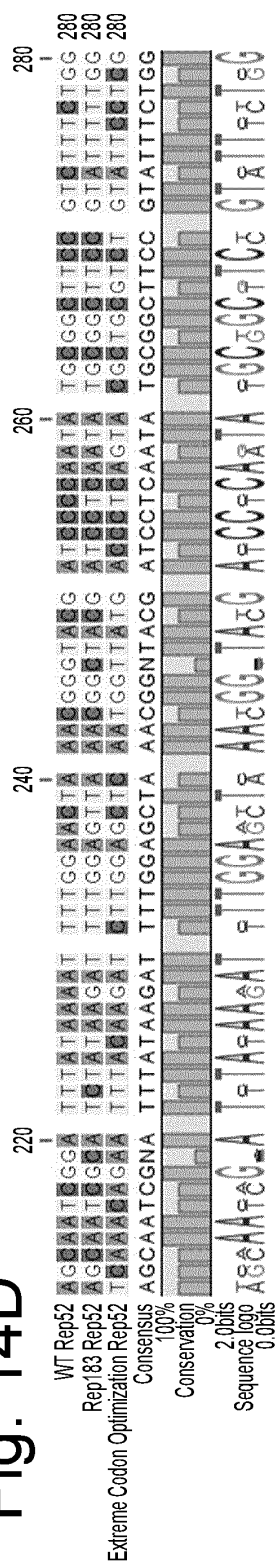


Fig. 14E

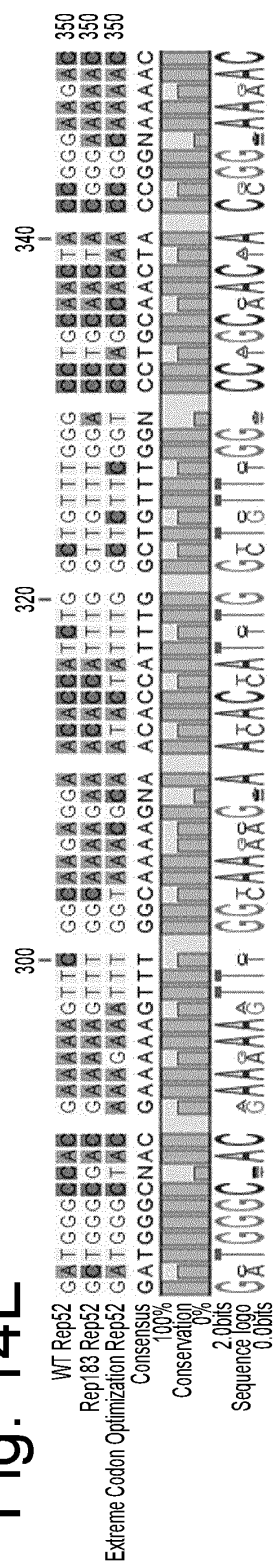


Fig. 14F

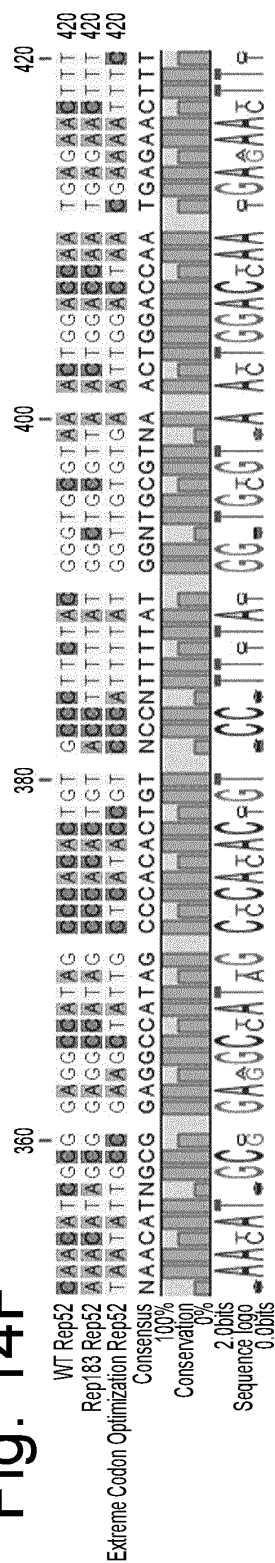


Fig. 14G

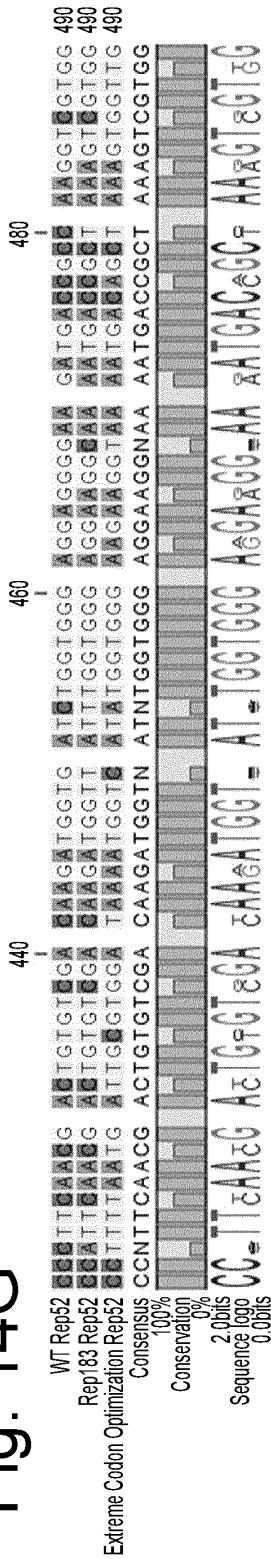


Fig. 14H

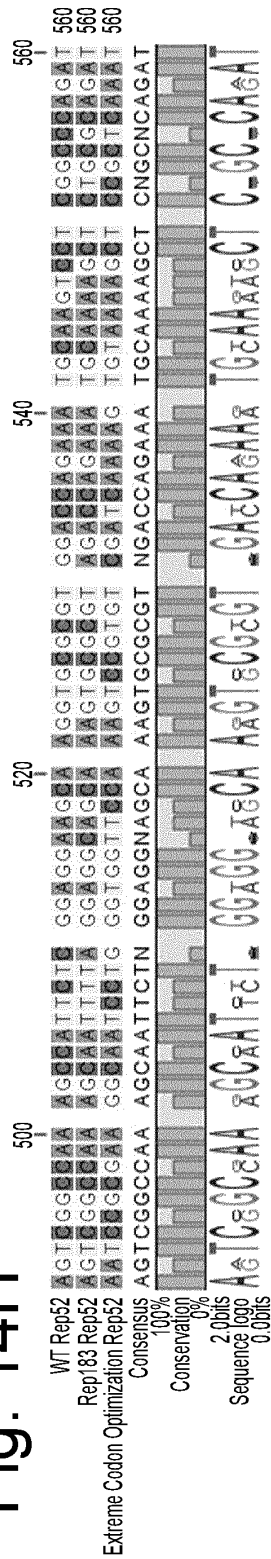


Fig. 14I

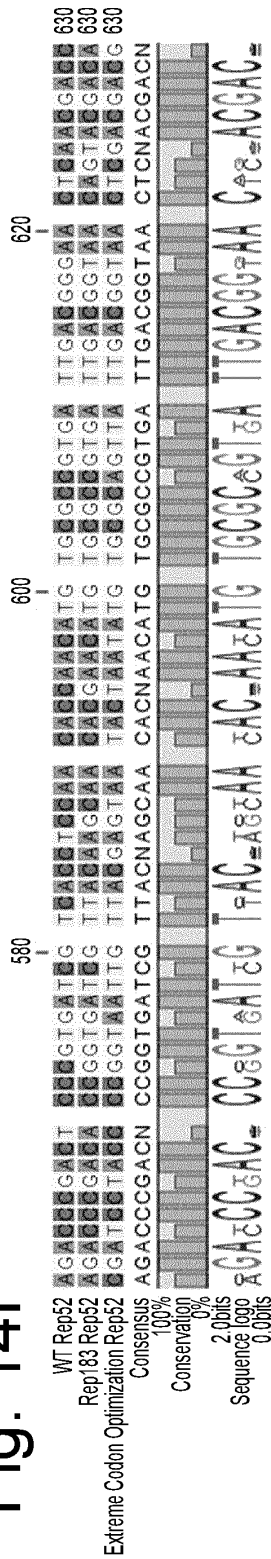
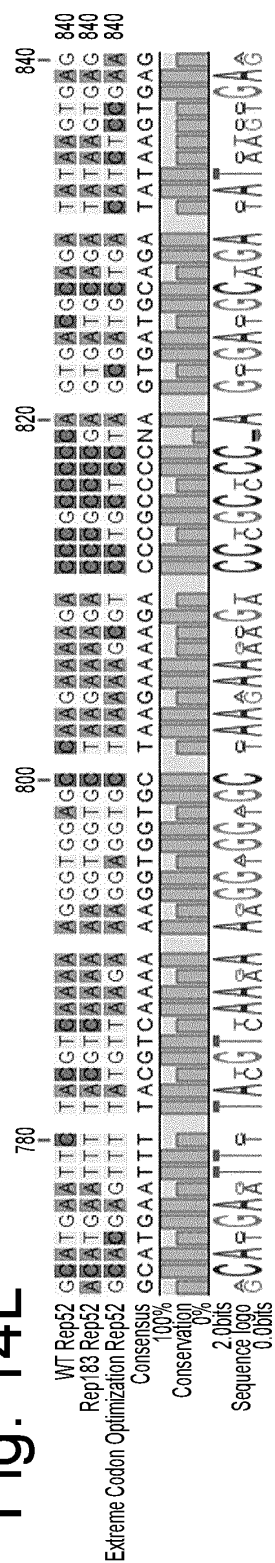


Fig. 14L



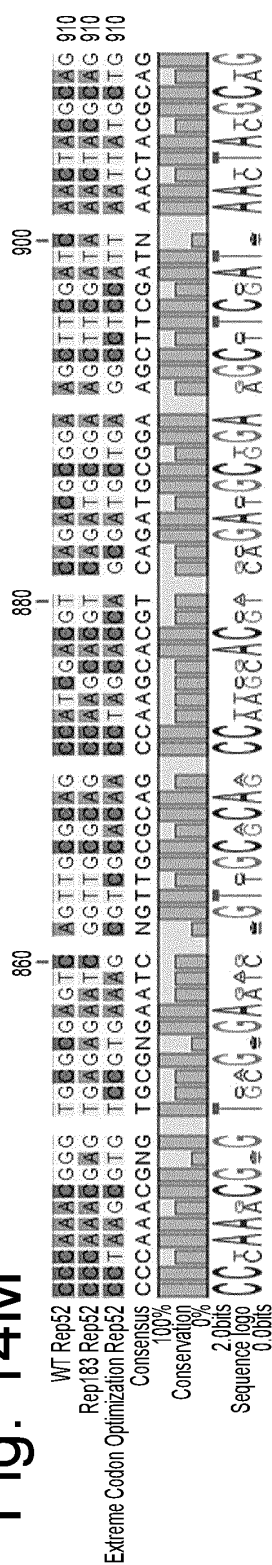


Fig. 14N

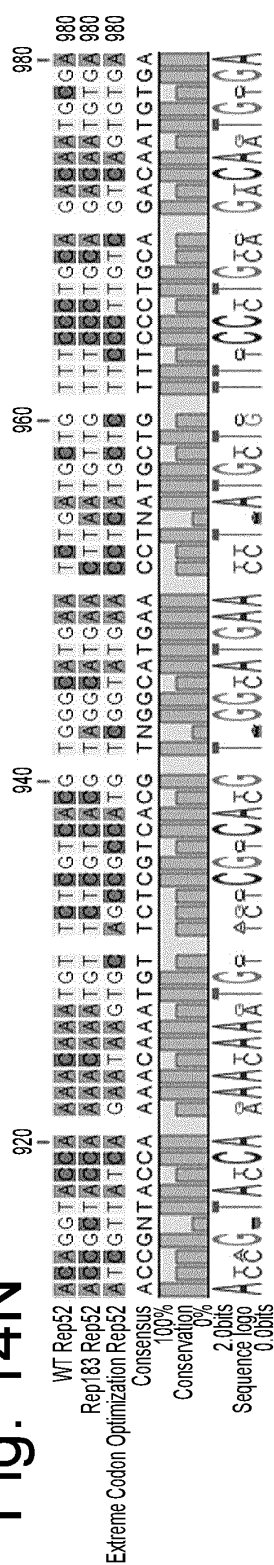


Fig. 140

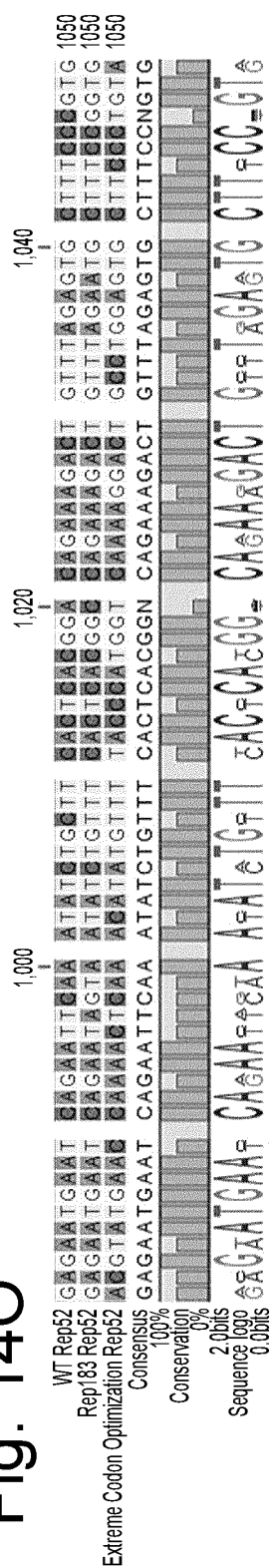


Fig. 15A

