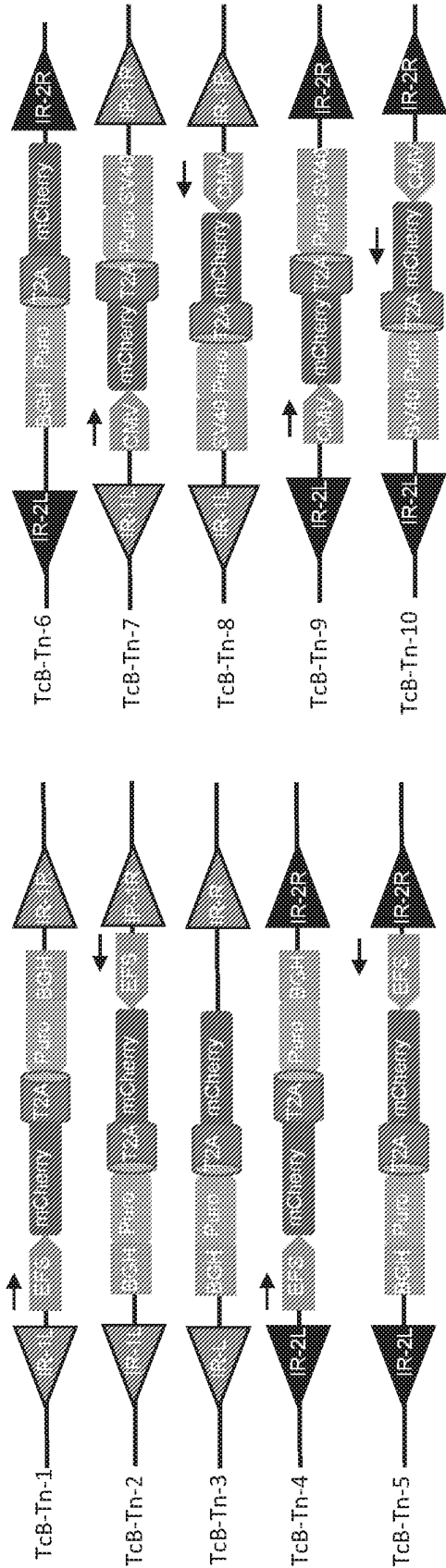




- TcB Tn-1 + WT-Ts
- TcB Tn-2 + WT-Ts
- TcB Tn-3 + WT-Ts
- TcB Tn-4 + WT-Ts
- TcB Tn-5 + WT-Ts
- TcB Tn-6 + WT-Ts
- TcB Tn-7 + WT-Ts
- TcB Tn-8 + WT-Ts
- TcB Tn-9 + WT-Ts
- TcB Tn-10 + WT-Ts

Transposon Integration Efficiency

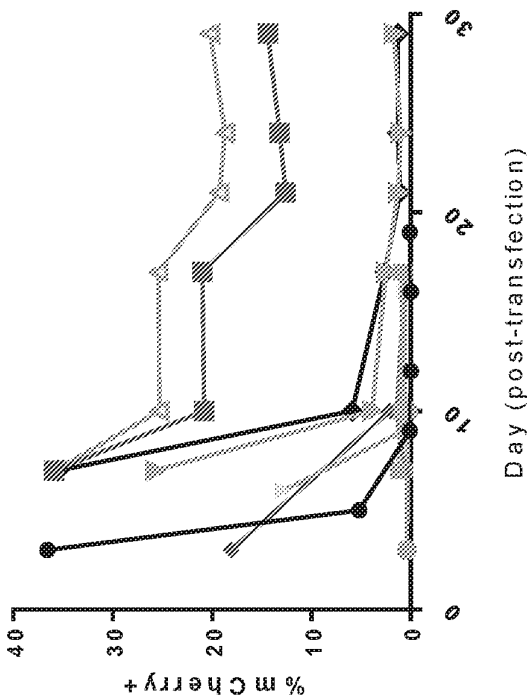


Fig. 1

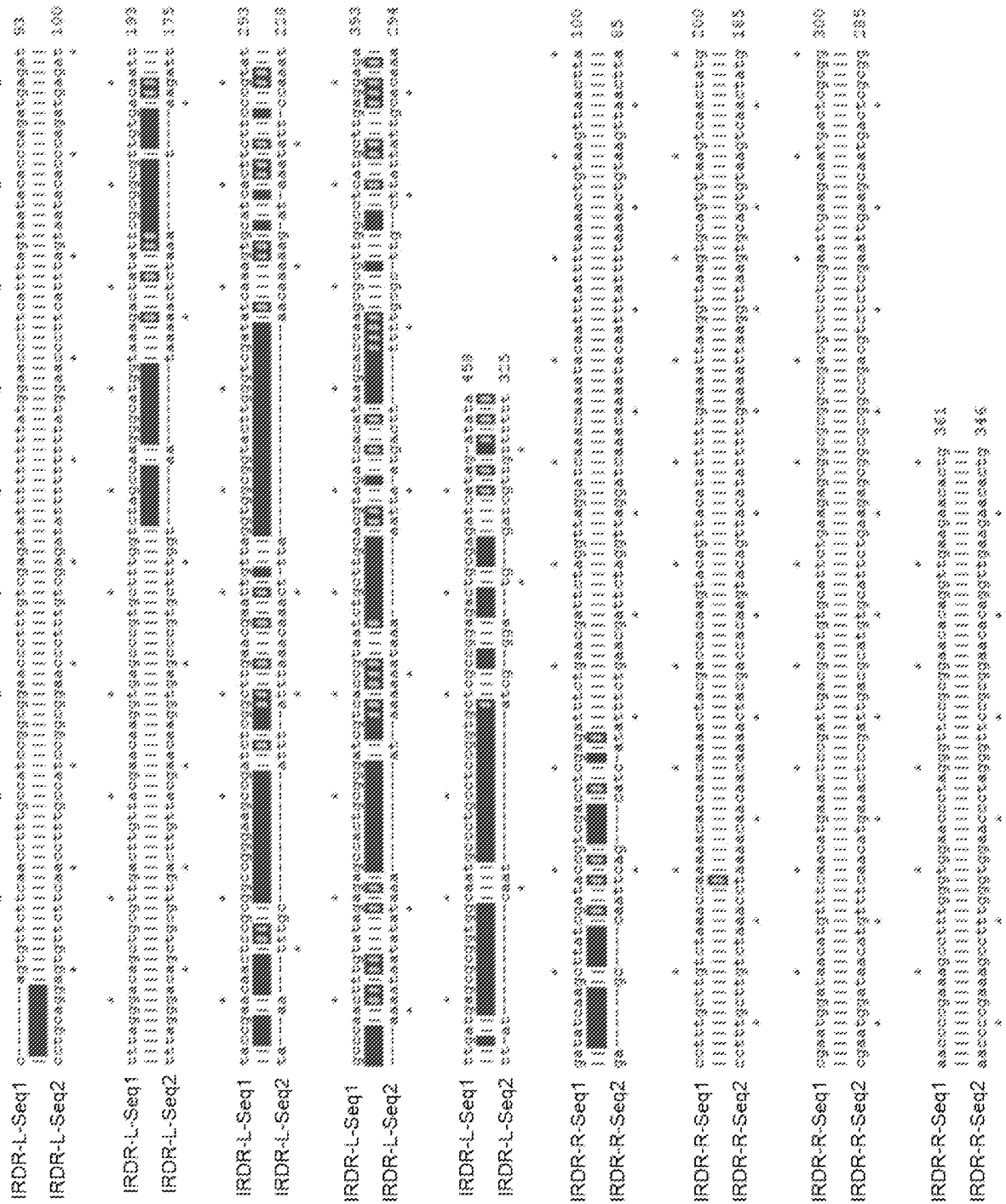


Fig. 2

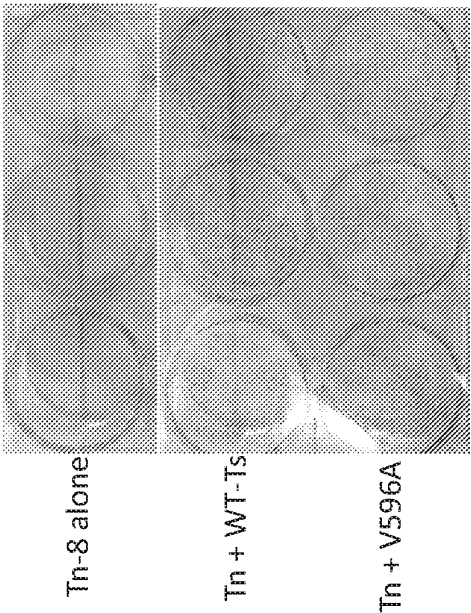


Fig. 3B

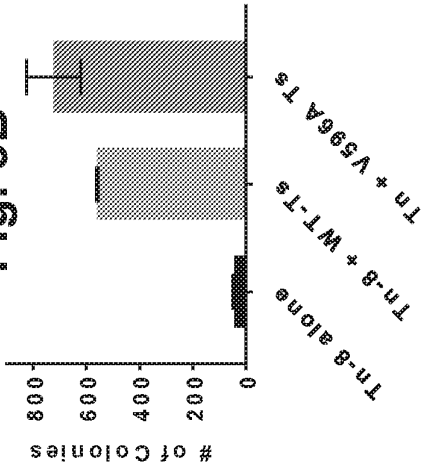


Fig. 3C

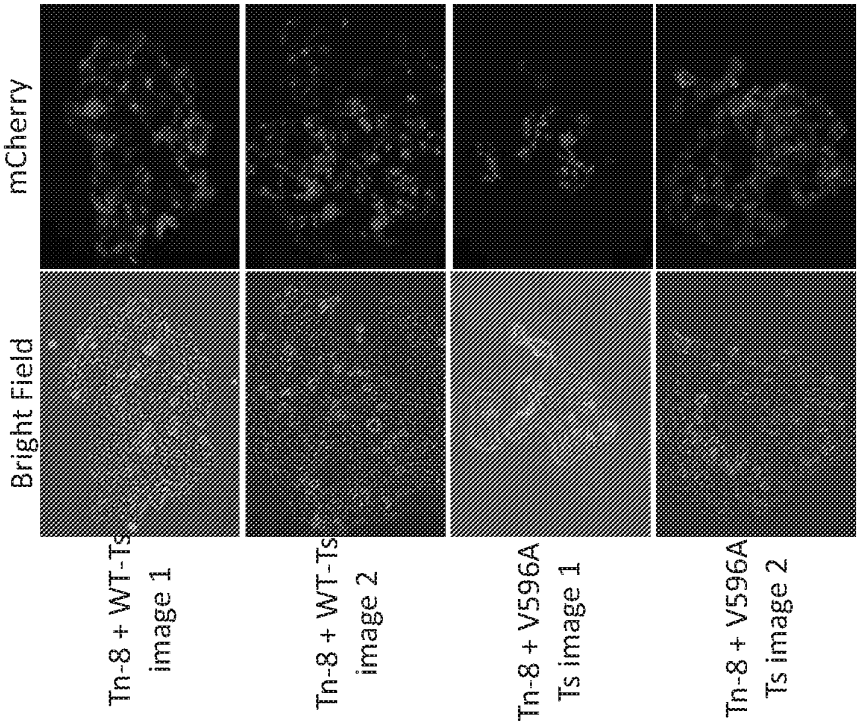


Fig. 3A

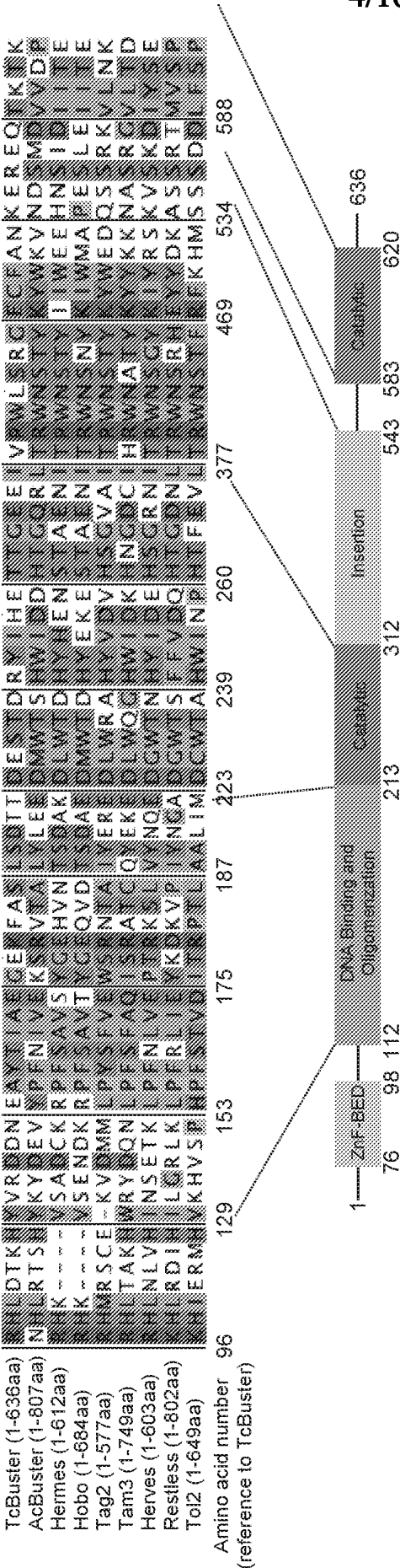


Fig. 4



5
6
7
8

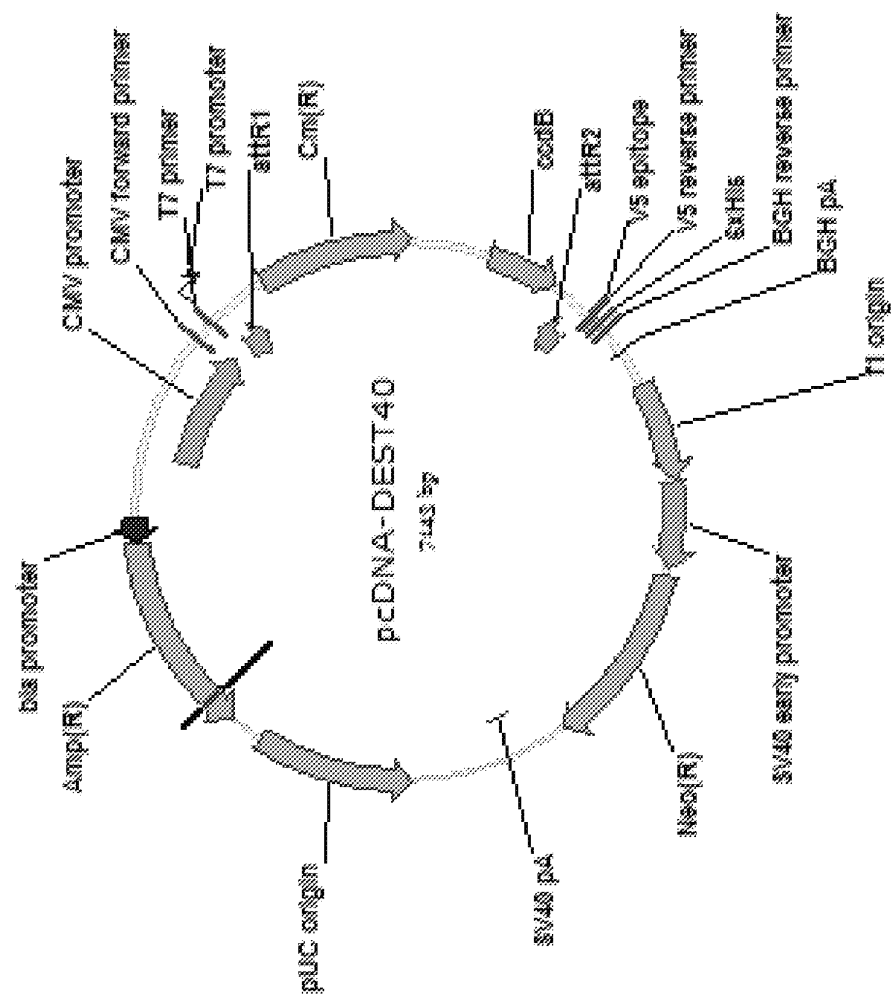


Fig. 6

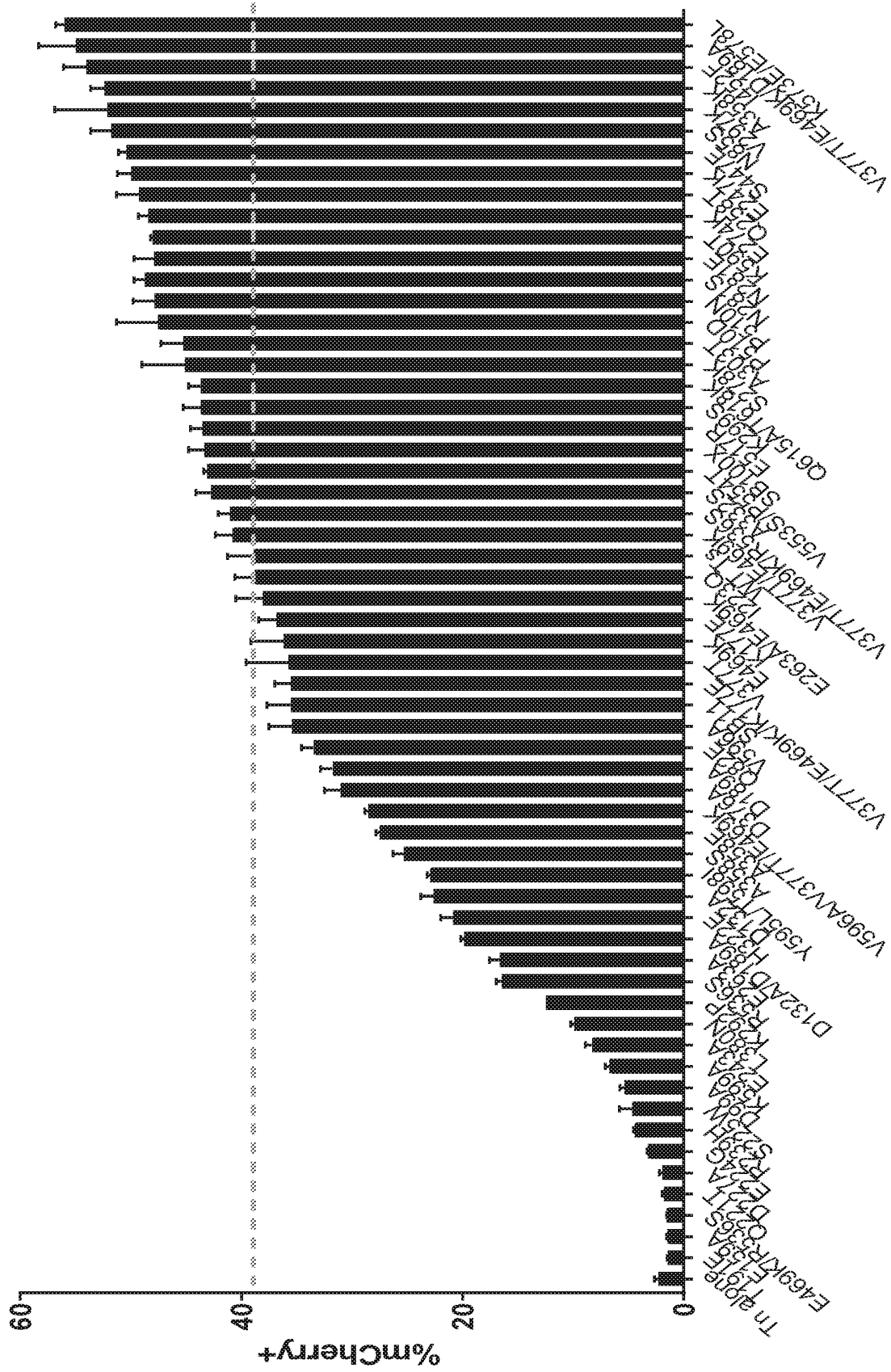


Fig. 7

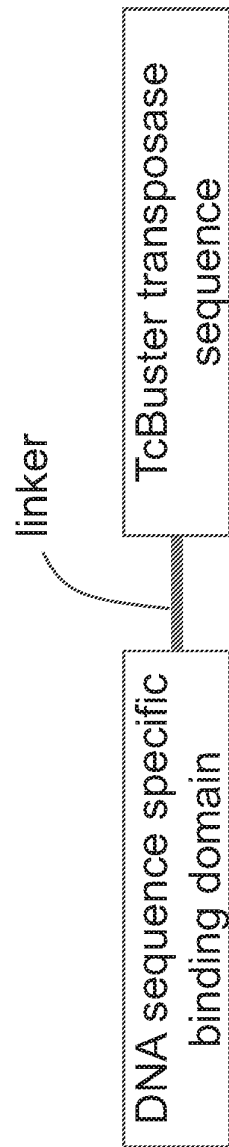


Fig. 8

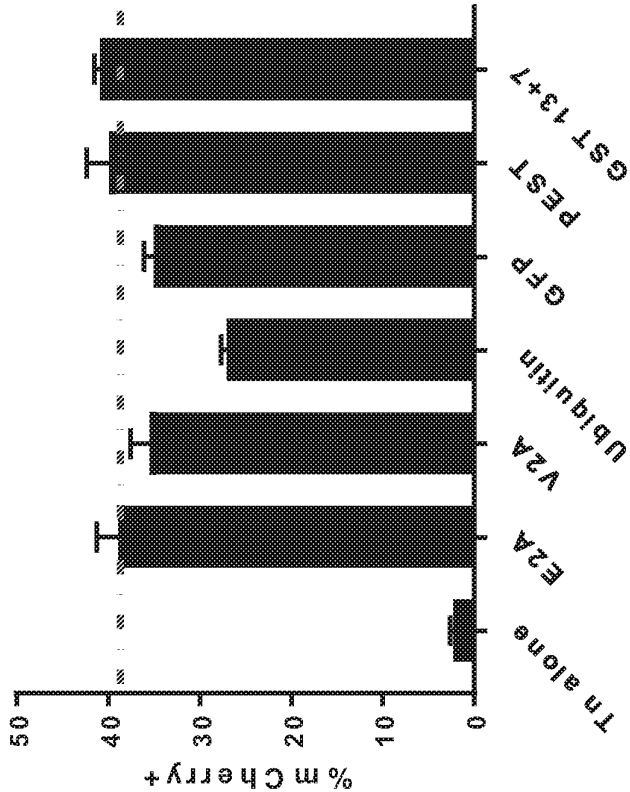


Fig. 9

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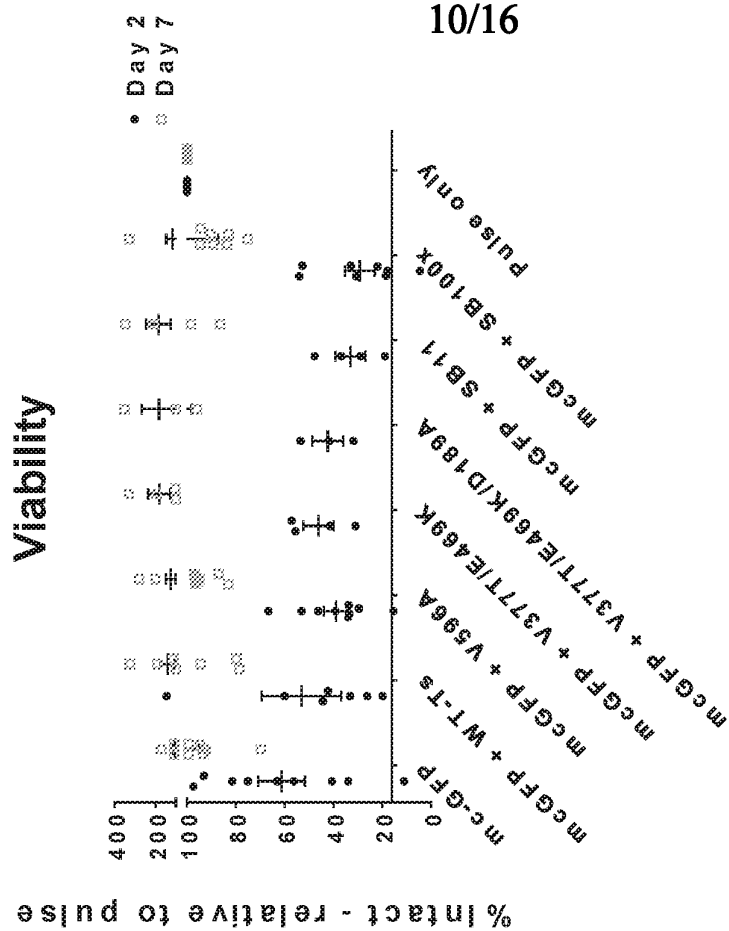


Fig. 10B

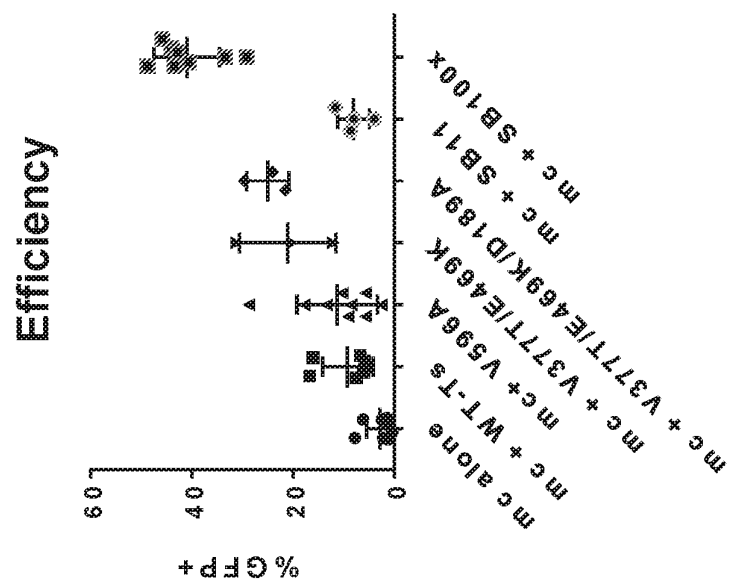


Fig. 10A

TcBuster
 MMLNWLSGKLESQSQEQSSCYLENSNCLPPTLSDTDIIGEEKAGTTS
 RKKRYDEDEYLNFGFTWTGDKDEPNGLCVICEQVNNSSLPAPLKRHL
 DTKHPTLKGKSEYFKRKCNELNQKKHTFERYVRDDNKNLLKASYLVSLRI
 AKQGEAYTIAEKLKPCTKDLTICVFGEKFASKVDLVPLSDTTISRRIEDM
 SYFCEAVLVNRLKNAKCGFTLQMD~~ESTDVAGLAILLVFVRYIHESSE~~
 DMLFCKALPTQTTGEEIFNLLNAYH~~E~~KH~~S~~PWNLCYHICTD~~G~~AKAMV
 G~~V~~KGVIARIKKLVDPDIKASHCCCLHRHALAVKRIPNALHEVLND~~AV~~KMINFIK
 SRPLNARVFALLCDDGLSLHKNLLHTEVRWLSRGKVLTRFWELRDEIRI
 FFNEREFAGKLNDSWLQNLAYIADIFSYLEVNL~~SL~~QGNSTIFK~~V~~NSRI
 NSIKSKLLWEECITKNNT~~EC~~FANLND~~F~~LETSENTALDPNLKSNILEHLNGLK
 NTFLEYFPPTCNNISWVENPFNECGNVDTLP~~IK~~EREQLDIRDTTLKSSF
 VPDGIG~~P~~FWIKLMDEFPEISKRAVKELMPFVT~~TY~~LC~~E~~KSFSVYVAT~~K~~TK
 YRNR~~LD~~AEDDMRL~~Q~~LT~~I~~IHP~~D~~IDLNL~~C~~NNKQAQKSH

Fig. 11

D189A/V377T/E469K
 MMLNWLKSGKLESQSQSCYLENSNCLPPTLDSTDIIGEENKAGTTS
 RKKRKYDEDYLNFGFTWTGDKDEPNGLviceqwnsslnpakkrhIDTKHPTL
 KKGSEYFKRKCNELNQKKHTFERYVRDDNKNLLKASYLVSLRIAKQGE

 AYTIAEKLIPCTKDLTTCVFGGEKFAKVDLVPLSATTISRRIEDMSYFCE
 AVLVNRLKNAKCGFTLQMDDESTDVAGLAILLVFVRYIHESSEEDMLFECK
 ALPTQTTGEEIFNLLNAYFEKHSPWNLCYHICTDGAKAMVGVIKGVARIK
 KLVDPDIKASHCCCLHRHALAVKRIPNALHEVLNDAVKMINFIKSRPLNARVFA

 LLCDDLGLSHKNLLHTETRWLSRGKVLTRFWELRDEIRIFFNEREFAGK
 LNDTSWLQNLA^YADI^FSYLNEVNLSLQGPNSTIFKVN^SRINSIKSKLKLWE

 ECITKNNTKCFANLNDFLETSNTALDPNLKSNILEHLNGLKNTFLEYFPPT
 CNNISWVENPFNECGNVDTLPIKEREQLIDIRTD^TTLKSSFPD^GGIGPFWIK
 LMDEFPEISKRAVKELMPFVTT^YTYLCEKSFSV^YVATKTKYRNRLDAEDDMR
LQLTTIHPPDIDNLCNNKQAKKSH

Fig. 12

D189A/V377T/E469K +I452F
 MMLNLKSGKLESQSQEQSSCYLENSNCLPPTLDSTDIIGENKAGTTS
 RKKRKYDEDYLNFGFTWTGDKDEPNGLviceqvnsslnpaklthIDTKHPTL
 KGKSEYFKRKCNELNQKKHTFERYVRDKNLLKASYLVSLRIAKQGE

 AYTIAEKLKPKDKDLTTCVFGEKFAASKVDLVLPSATTISRRIEDMSYFCE
 AVLVNRLKNAKCGFTLQMDDESTDVAGLAILLVFVRYIHESSEEDMLFCK
 ALPTQTTGEEIFENLLNAYFEKHSIPWNLCYHICTDGAKAMVGVIKGVARIK
 KLVDPDIKASHCCCLHRHALAVKRIPNALHEVLNDVAKMINFIKSRPLNARVFA

 LLCDDLGLSHKNLLHTETRWLSRGKVLTRFWELRDEIRIFFNEREFAGK

 LNDTSWLQNLAZIADIFSYLNEVNLSLQGPNSTIFKVNSRINSFKSKLKLW

 EECITKNNTKCFANLNDFLETSNTALDPNLKSNILEHLNGLKNTFLEYFPP
 TCNNISWVENPFNECGNVDTLPIKEREQLDIRDTTLKSSFVPDGIGPFWI
 KLMDEFPEISKRAVKELMPFVTITYLCEKSFVSYYVATKTKYRNRLDAEDDM
 RLQLTTIHPDIDNLCNNKQAQKSH

Fig. 13

D189A/V377T/E469K +N85S
 MMLNWLKSGKLESQSQEQSSCYLENSNCLPPTLDSTDIIGENKAGTTS
 RKKRKYDEDYLNFGFTWTGDKDEPNGLcviceqw **S**nsslnpaklrhIDTKHPT
 LKGKSEYFKRKCNELNQKKHTFERYVRDDNKNLLKASYLVSLRIAKQGE
 AYTIAEKLKPKCTKDLTTCVFGEKFASKVDLVPLs **A**ttisrriedmsyfCE
 AVLVNRLKNAKCGFTLQMDDESTDVAGLAILLVFVRYIHESSEEDMLFCK
 ALPTQTTGEEIFNLLNAYFEKHSIPWNLCYHICTDGAKAMVGVIKGVARIK
 KLVDPDIKASHCCLHRHALAVKRIPNALHEVLNDAVKMINFIKSRPLNARVFA
 LLCDDLGSLSLHKNLLLHTE **T**RWLSRGKVLTRFWELRDEIRIFFNEREFAGK
 LNDTSWLQNLAAYIADIFSYLNEVNLSLQGPNSTIFKVNRSINSIKSKLKLWE
 ECITKNNT **K**CFANLNDFLETSNTALDPNLKSNILEHLNGLKNTFLEYFPPT
 CNNISWVENPFNECGNVDTLPKEREQLIDIRDTTLKSSFVPDGIGPFWIK
 LMDEFPEISKRAVKELMPFVTITYLCEKSFVSVVATKTKYRNRLDAEDDMR
 LQLTTIHPPDIDNLCNNKQAQKSH

Fig. 14

D189A/V377T/E469K +A358K
 MMLNWLKSGKLESQSQEQSSCYLENSNCLPPTLDSTDIIGENKAGTTS
 RKKRKYDELYNFGFTWTGDKDEPNGLviceqvnsslnpakrhIDTKHPTL
 KGKSEYFKRKCNELNQKKHTFERVVRDDNKNLLKASYLVSLRIAKQGE
 AYTIAEKLIPCTKDLTTCVFGEKFASKVDLVPLSATTISRRIEDMSYFCE
 AVLVNRLKNAKCGFTLQMDDESTDVAGLAILLVFVRYIHESSEEDMLFCK
 ALPTQTTGEEIFNLLNAYFEKHSIPWNLCYHICTDGAKAMVGVIKGVARIK
 KLVDPDIKASHCCLHRHALAVKRIPNALHEVLNDAVKMINFIKSRPLNARVF
 KLLCDDLGLSHKNLLHTETRWLSRGKVLTRFWELRDEIRIFFNEREFA
 GKLNDSWLQNLAYIADIFSYLEVNLNLQGPNSTIFKVNSRINSIKSKLKL
 WEECITKNNTKCFANLNDFLETSNTALDPNLKSNILEHLNGLKNTFLEYF
 PPTCNNISWVENPFNECGNVDTLPIKEREQLDIRTDTTLKSSFVDPDGIGPF
 WIKLMDEFPEISKRAVKELMPFVTITYLCEKSFVVVATKTKYRNRLDAED
 DMRLQLTTIHPDIDNLCNNKQAKQSH

Fig. 15

D189A/V377T/E469K +K573E/E578L
 MMLNVWLKSGKLESQSQEQSSCYLENSNCLPPTLTDSTDIIGENKAGTTS
 RKKRKYDEDYLNFGFTWTGDKDEPNGLviceqvnsslnpaklrhIDTKHPTL
 KGKSEYFKRKCNELNQKKHTFERYVRDDNKNLLKASYLVSLRIAKQGE
 AYTIAEKLKPKCTKDLTTCVFGEKFASKVDLVPLSATTISRRIEDMSYFCE
 AVLNVRLKNAKCGFTLQMDDESTDVAGLAILLVFVRYIHESSEEDMLFCK
 ALPTQTTGEEIFENLLNAYFEKHSIPWNLCYHICTDGAKAMVGVIARIK
 KLVDPDIKASHCCCLHRHALAVKRIPNALHEVLNDVAKMINFIKSRPLNARVFA
 LLCDDLGLSHKNNLLHTETRWLSRGKVLTRFWELRDEIRIFFNEREFAGK
 LNDTSWLQNLA YIADIFS YLNEVNLSLQGPNSTIFKVNRSRINSIKSKLKLWE
 ECITKNNTKCFANLNDFLETSNTALDPNLKSNILEHLNGLKNTFLEYFPPT
 CNNISWVENPFNECGNVDTLPIKEREQLIDIRTDITLKSSFVPDGIGPFWIK
 LMDEFPEISERAVKLLMPFVTITYLCEKSEFSVYVATKTKYRNRLDAEDDM
RLQLTTIHPDIDNLCNNKQAQKSH

Fig. 16