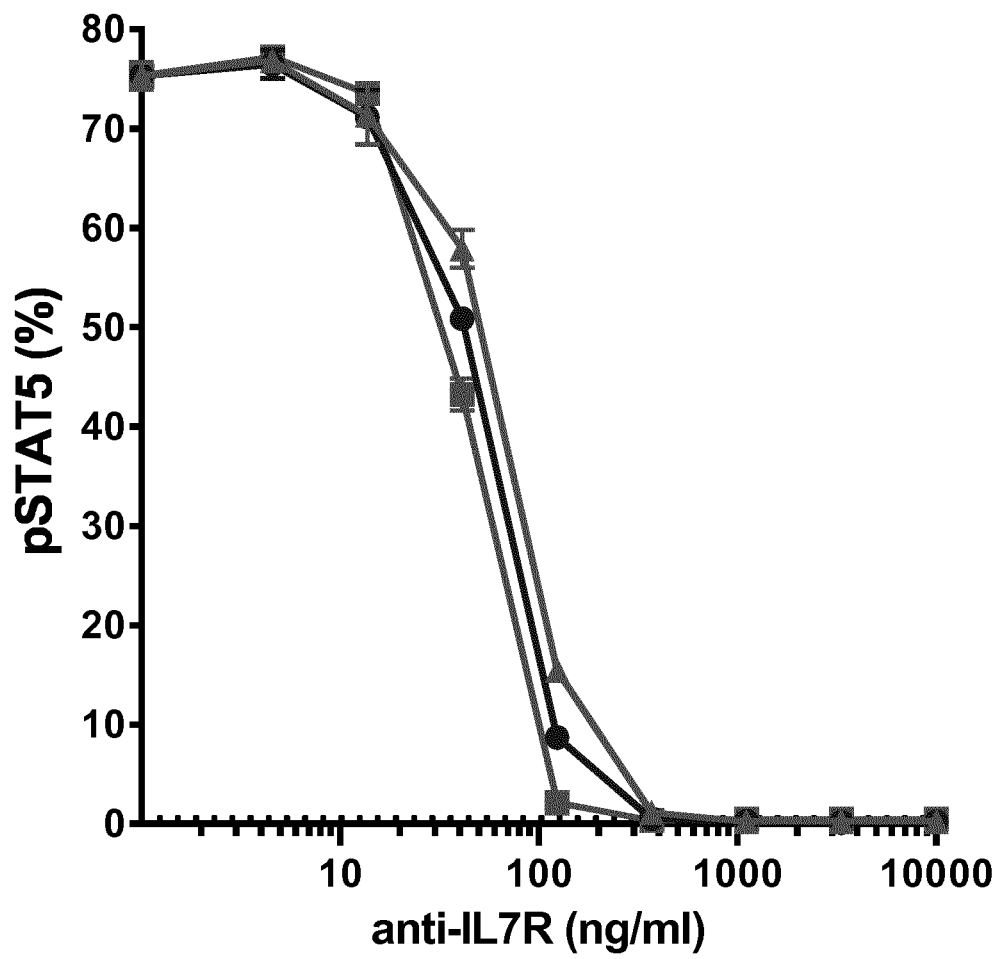
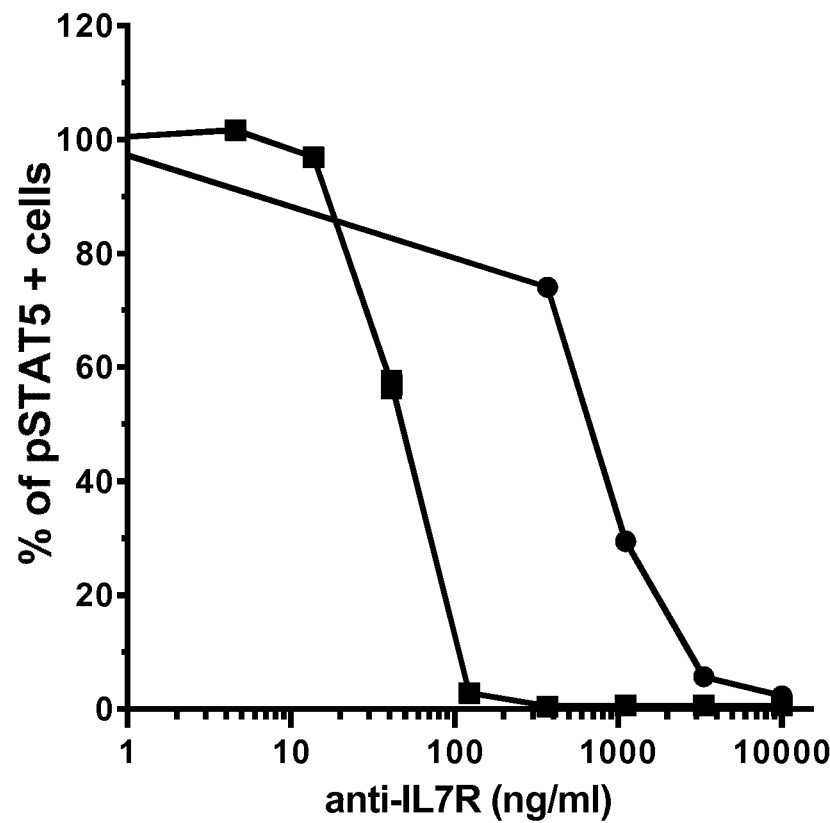


1 / 28

Figure 1



A.



B.

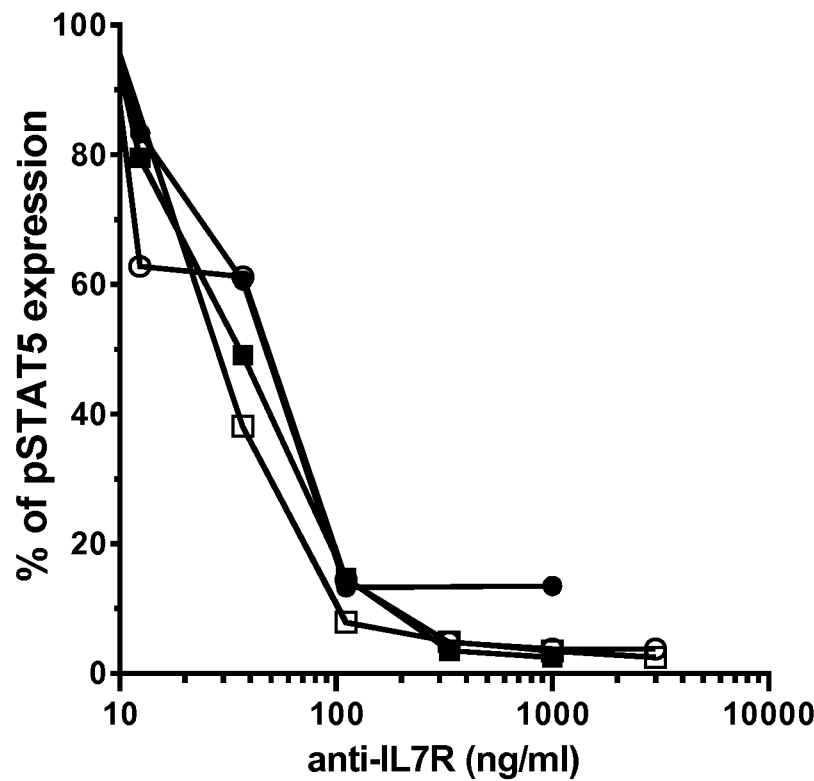


Figure 2

3/24

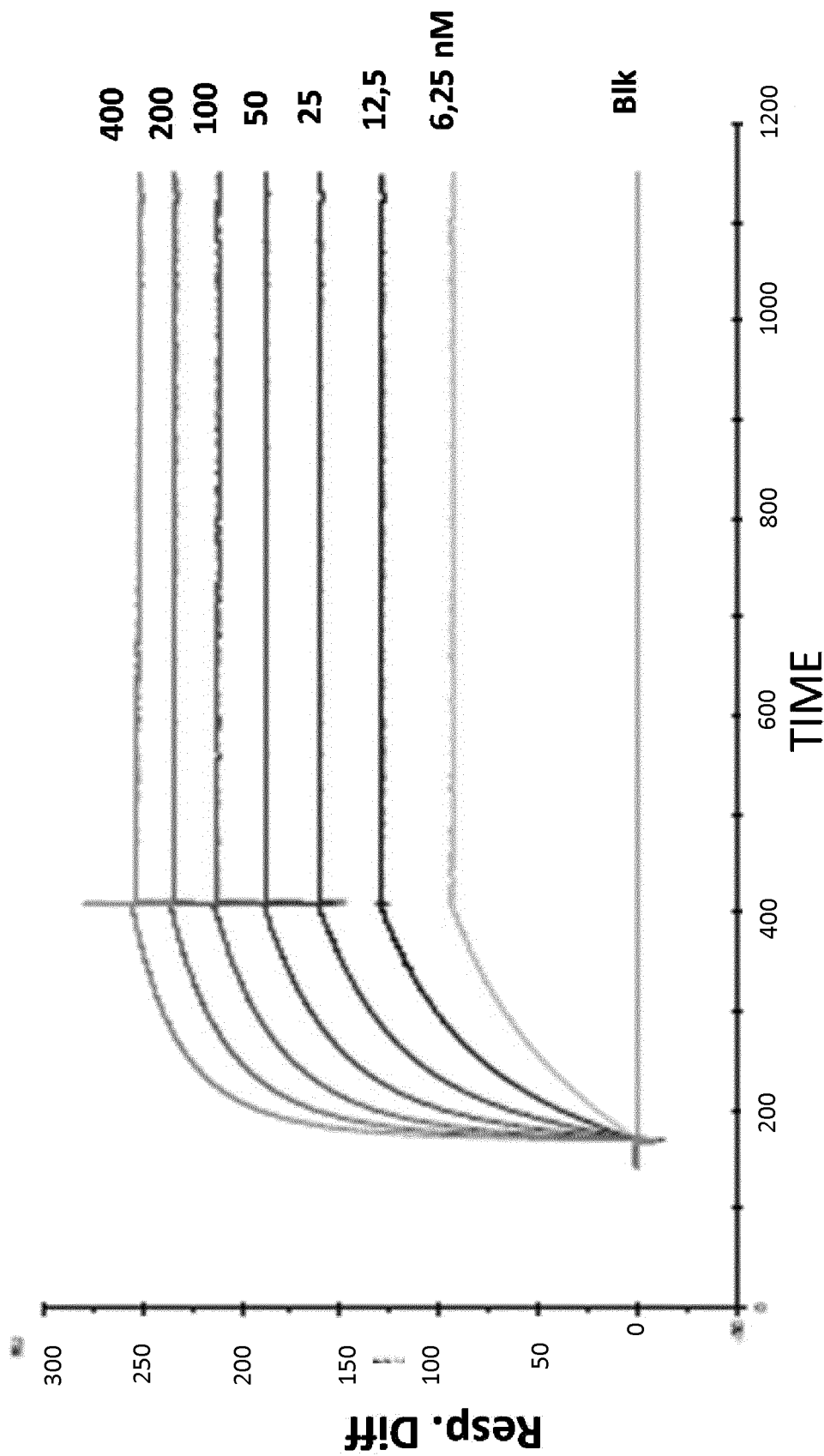


Figure 3

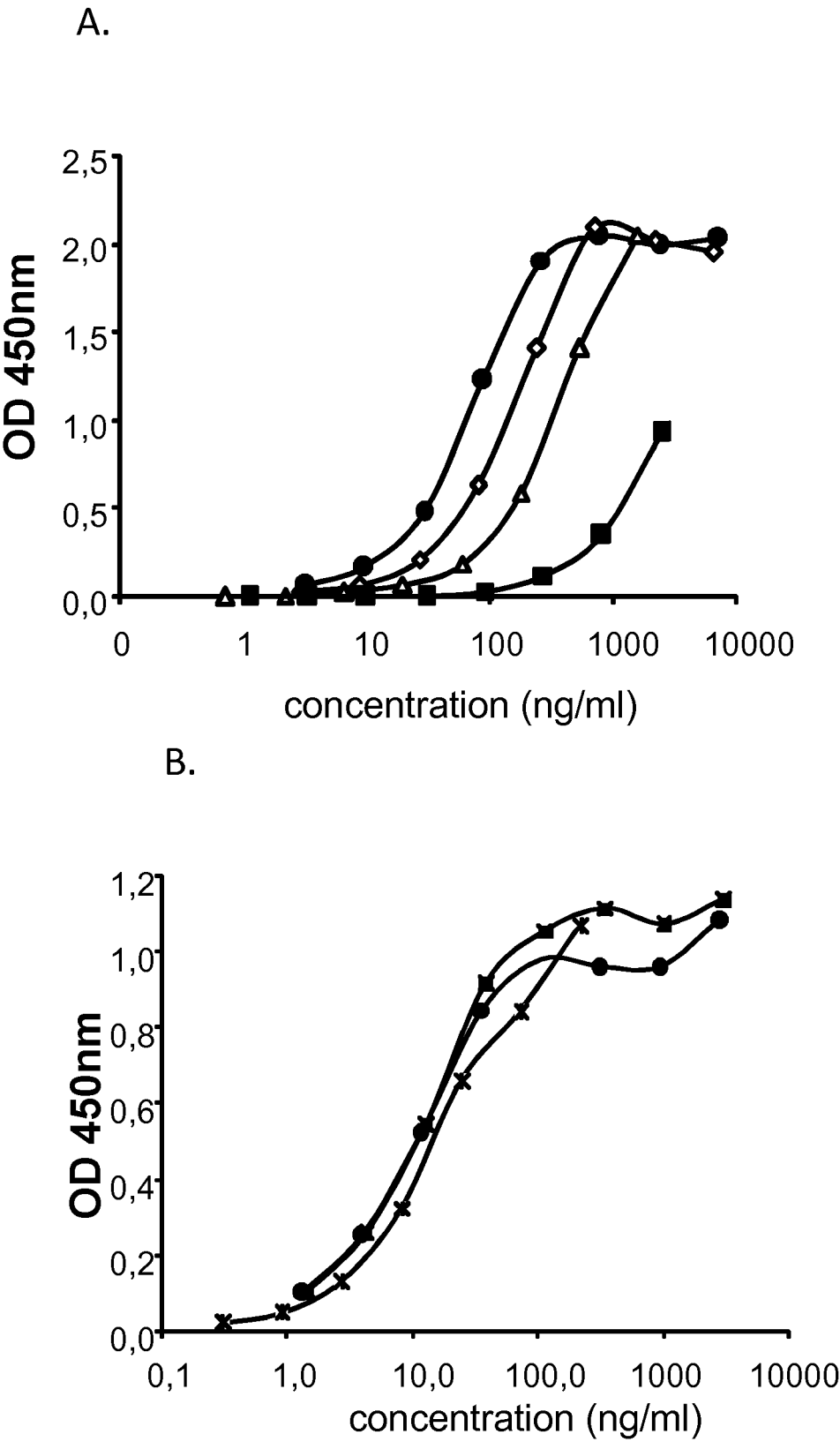
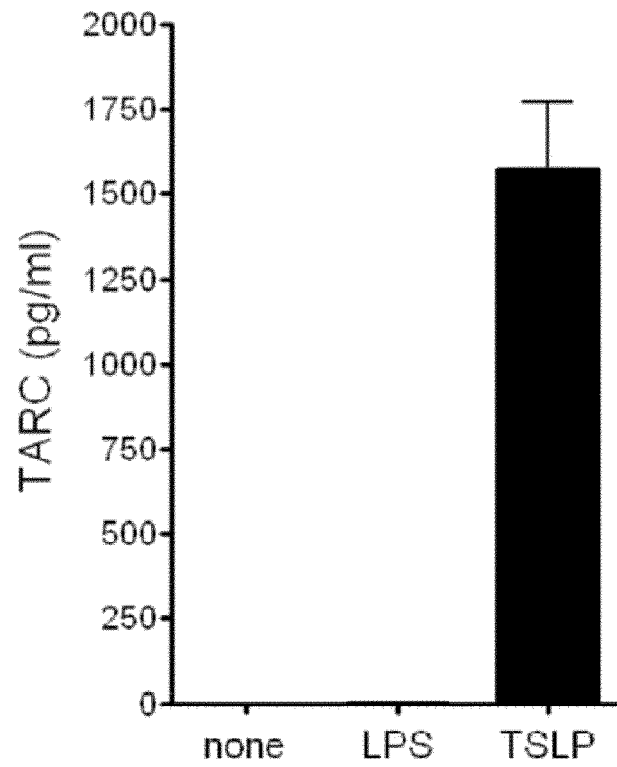


Figure 4

5 / 28

A.



B.

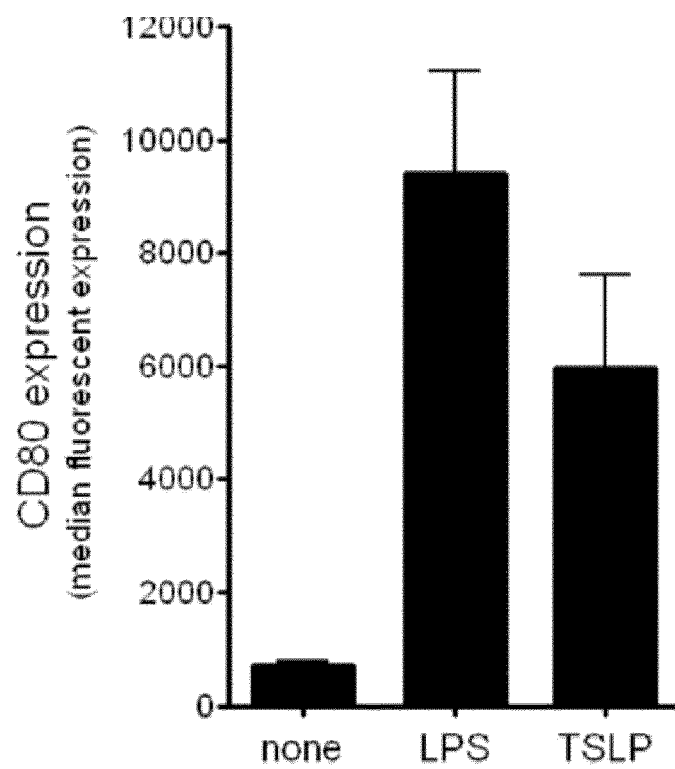


Figure 5

6 / 28

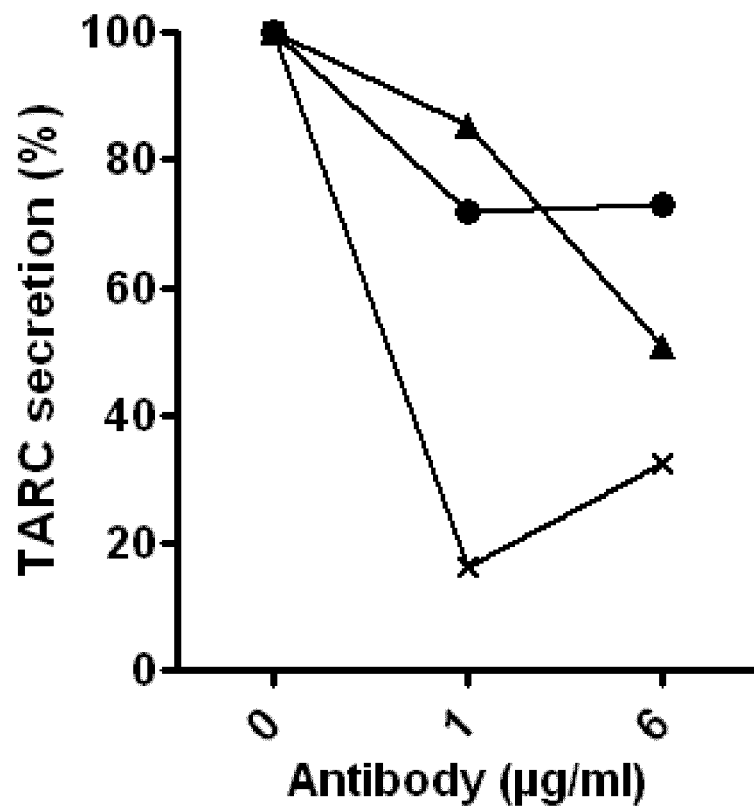
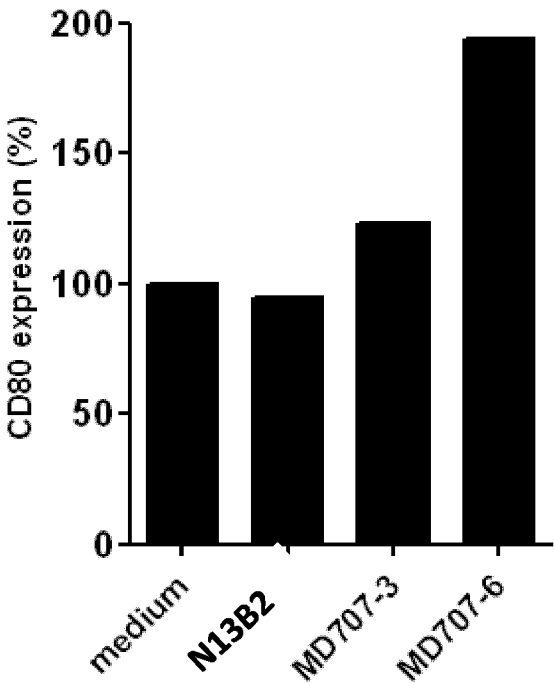


Figure 6

A.



B.

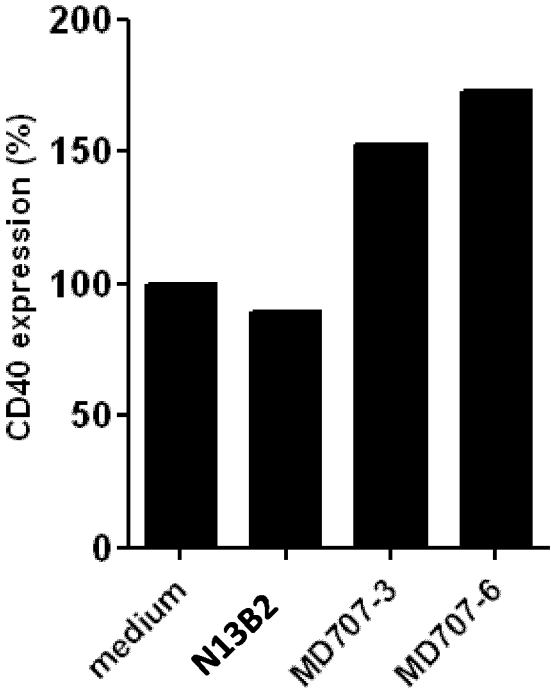


Figure 7

8 / 28

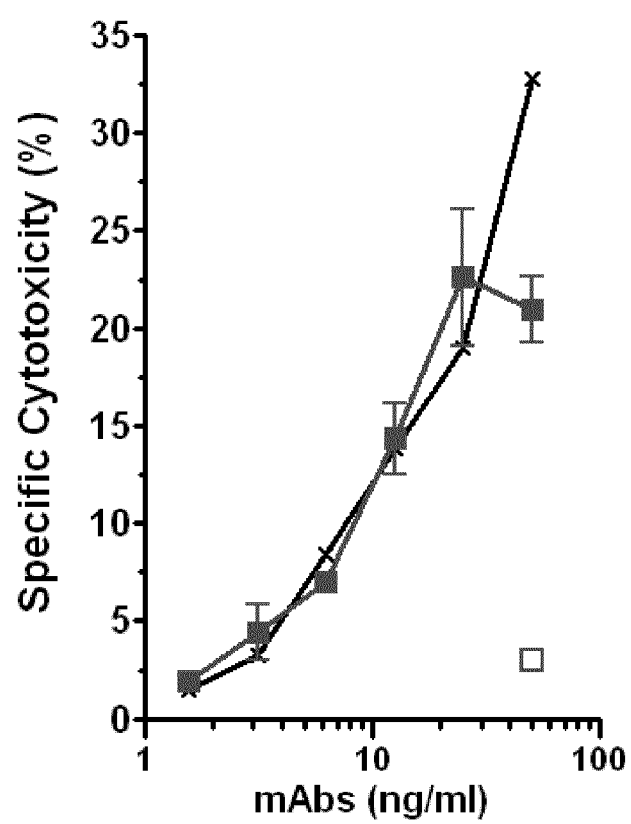


Figure 8

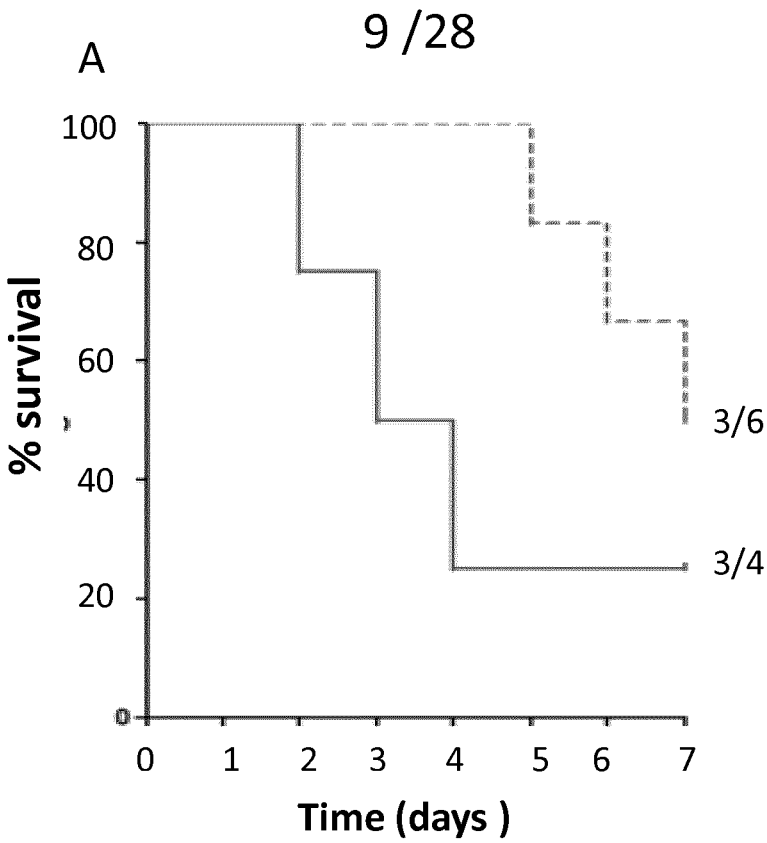
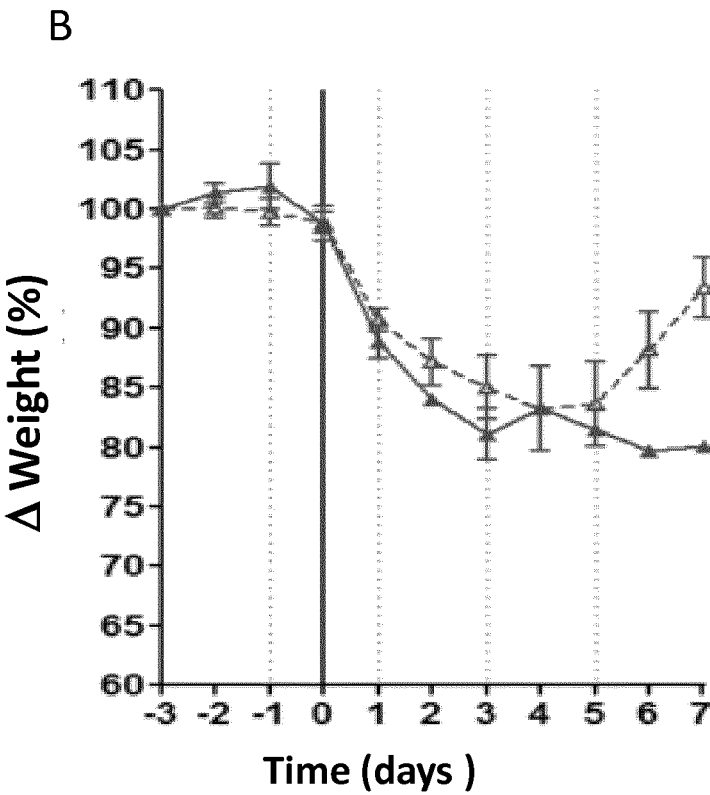


Figure 9

VH-FcG1M (E333A) - DNA 10 / 28

GCGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTAGTGCAGCCTGGAGGGTC
CCTGAAACTCTCCTGTGCAGTCTCAGGATTCACTCTCAGTGACTATTACATGGC
CTGGGTCCGCCAGGCTCCAAAGAAGGGTCTGGAATGGGTTCGCAACCATTAGT
GCCAGTGGGCTCAGAACTTACTATCCAGACTCCGTGAAGGGCCGCTTCACTAT
CTCCAGAGATGATGCAAAAAGGAGCCTCTTCCTGCAAATGACCAGTCTGAAGT
CTGAGGACACGGCCACTTATTACTGTGCAAGACCGATGTCTGCACACTATGGT
TTTAACTACTTTGATTACTGGGGCCAAGGAGTCATGGTCAAGTCTCCTCAgcta
gcaccaagggcccatcggtcttccccctggcaccctcctccaagagcacctctgggggcacagcgccctgggc
tgcttggtcaaggactacttccccgaaccggtgacggtgctgtggaactcaggcgccctgaccagcggtgcac
accttcccggtgtcttacagtctcaggacttactccctcagcagcgtggtgaccgtgccctccagcagcttggg
caccagacctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagaaagttgagcccaa
atcttgtagacaaaactcacacatgccaccgtgccagcacctgaactcctggggggaccgtcagcttctcttcc
ccccaaaacccaaggacaccctcatgatctcccgaccctgaggtcacatgctggtggtggacgtgagccac
gaagaccctgaggtcaagttcaactggtacgtggacggcgtggaggtgcataatgccaagacaaagccgcggg
aggagcagtacaacagcacgtaccgtgtggtcagcgtcctcaccgtcctgcaccaggactggctgaatggcaag
gagtacaagtgaaggttccaacaaagccctcccagcccccatcgcgaaaaccatctccaaagccaaaggg
cagccccgagaaccacaggtgtacaccctgcccccatcccgggaggagatgaccaagaaccaggtcagcctg
acctgctgtgtaaaggcttctatcccagcgacatcgccgtggagtgggagagcaatgggcagccggagaaca
actacaagaccacgcctcccgtgctggactccgacggctccttctctctacagcaagctcaccgtggacaaga
caggtggcagcaggggaacgttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaaga
gcctctccctgtctccgggtaaatga

VL-CLKAPPA - DNA

GACATCCAGATGACACAGTCTCCAGCTTCCCTGTCTGCATCTCTGGGAGAAAC
TGTCACCATCGAATGTCGAACAAGTGAGGACATTTACAATGGTTTAGCATGGTA
TCAGCAGAAGCCAGGGAAATCTCCTCAGCTCCTGGTCTATAGTGCAAATAGCT
TACATATTGGGGTCCCATCACGGTTCAGTGGCAGTGGATCTGGTACACAGTATT
CTCTCAAGATAAACAGCCTGCAATTTGAAGATGTCGCAAGTTATTTCTGTCAAC
AGTATTACGATTATCCGCTCGCGTTCGGTTCTGGGACCAAGCTGGAGATCAAA
CGGacggtggtgcaccatctgtcttcatcttcccgccatctgatgagcagttgaaatctggaactgcctctgtgtg
gcctgtgaataacttctatcccagagaggccaaagtacagtgaaggtggataacgccctccaatcgggtaact
cccaggagagtgacagagcaggacagcaaggacagcacctacagcctcagcagcaccctgacgtgagc
aaagcagactacgagaacacaaagtctacgcctgcgaagtcacccatcagggcctgagctcgcccgtcacac
agagcttcaacaggggagagtgttag

VH-FcG1M (E333A) - Protein

AVQLVESGGGLVQPGGSLKLSCAVSGFTLSDYIMAWVRQAPKKGLEWVATISASGLRYYPD^{SV}KGRF
TISRDDAKRSLFLQMTSLKSEDTATYYCARPMSAHYGFNYFDYWGQGVMTVSSastkgpsvfplapssks
sggtaalglvkdypfpvtvswngaltsgvhtfpavlqssglyslssvtvpssslgtqyicnvnhkpsntkvdkkvepkscd
kthtccppcpapellggpsvflfppkpkdtlmisrtpevtcvvvdvshedpevkfnwyvdgvevhnaktkpreeqynstyrvv
svltvlhqdwlngkeykckvsnkalpapiaktiskakgqprepqvylppsreemtknqvslctclvkgyfypsdiavewesngq
pennykttppvldsdgsfflyskltvdksrwqqgnvfscsvmhealhnhytqkslsisp^{gk}*

VL-CLKAPPA - Protein

DIQMTQSPASLSASLGFTVETIECRTSEDIYNGLA^{WY}QQKPGKSPQLLVYSANSLHIGVPSRFSGSGSGTQ
YSLKINS^{LQ}FEDVAS^{YFCQ}YYDYPLAFGSGTKLEIKRtvaapsvfifppsdeqlksgtasvvcllnnfybreakvqw
kvdnalqsgnsqesvteqdsdstyslsstltlskadyekhkvyacevthqglsspvtk^{sfn}rec*

Figure 10

VH-FCG4M (S228P) - DNA 11 / 28

GCGGTGCAGCTGGTGGAGTCTGGGGGAGGCCTAGTGCAGCCTGGAGGGT
 CCCTGAAACTCTCCTGTGCAGTCTCAGGATTCACTCTCAGTGACTATTACAT
GGCCTGGGTCCGCCAGGCTCCAAAGAAGGGTCTGGAATGGGTTCGCAACC
ATTAGTGCCAGTGGGCTCAGAACTTACTATCCAGACTCCGTGAAGGGCCGC
TTCATCTCTCCAGAGATGATGCAAAAAGGAGCCTCTTCCTGCAAATGACCA
GTCTGAAGTCTGAGGACACGGCCACTTATTACTGTGCAAGACCGATGTCTG
CACACTATGGTTTTAACTACTTTGATTACTGGGGCCAAGGAGTCATGGTCAC
 AGTCTCCTCAgctagcaccaaggggcccatcggtcttccccctggcgccctgtccaggagcacctccg
 agagcacagccgcccctgggctgctgtgtaaggactacttccccgaaccggtgacggtgtcgtggaactcag
 gcgcccgtgaccagcggtgcacacctcccggctgtcctacagtctcaggactctactccctcagcagcgt
 ggtgaccgtgccctccagcagcttgggcacgaagacctacacctgcaacgtagatcacaagcccagcaac
 accaaggtggacaagagagttgagtccaaatatggtcccccattgccaccatgccagcacctgagttcctg
 gggggaccatcagtcttctgttccccccaaaacccaaggacactctcatgatctcccgaccctgagggtca
 cgtgcgtggtggtggacgtgagccaggaagaccccgagggtccagttcaactggtacgtggatggcggtggag
 gtgcataatgccaagacaaagccgcgggaggagcagttcaacagcacgtaccgtgtggtcagcgtcctcac
 cgtcctgcaccaggactggctgaacggcaaggagtacaagtgaagggtctccaacaaggcctcccgtcct
 ccatcgagaaaaccatctccaaagccaaagggcagccccgagagccacaggtgtacaccctgccccatc
 ccaggaggagatgaccaagaaccaggtcagcctgacctgcctggtcaaaggcttctacccagcgacatcg
 ccgtggagtgggagagcaatgggcagccggagaacaactacaagaccacgcctcccgtgctggactccg
 acggctccttctcctctacagcaggctaaccgtggacaagagcaggtggcaggaggggaatgtcttctcatg
 ctccgtgatgcatgaggctctgcacaaccactacacacagaagagcctctccctgtctccgggtaaata

VL-CLKAPPA - DNA

GACATCCAGATGACACAGTCTCCAGCTTCCCTGTCTGCATCTCTGGGAGAA
 ACTGTCACCATCGAATGTGGAACAAGTGAGGACATTTACAATGGTTTAGCAT
 GGTATCAGCAGAAGCCAGGGAAATCTCCTCAGCTCCTGGTCTATAGTGCAA
ATAGCTTACATATTGGGGTCCCATCACGGTTCACTGGCAGTGGATCTGGTAC
ACAGTATTCTCTCAAGATAAACAGCCTGCAATTTGAAGATGTGCAAGTTATT
TCTGTCAACAGTATTACGATTATCCGCTCGCGTTTCGGTTCTGGGACCAAGCT
 GGAGATCAAACGGacggtggctgcaccatctgtcttcatcttcccgcctctgatgagcagttgaaatct
 ggaactgcctctgtgtgtgcctgctgaataacttctatcccagagaggccaaagtacagtggaagggtgataa
 cgccctccaatcgggtaactcccaggagagtgctacagagcaggacagcaaggacagcacctacagcctc
 agcagcacctgacgctgagcaaagcagactacgagaaacacaaagtctacgcctgcaagtcacccatc
 agggcctgagctcgcccgctcacaagagcttaacaggggagagtgtag

VH-FCG4M (S228P) - Protein

AVQLVESGGGLVQPGLSLKLSCAVSGFTLSDYIMAWVRQAPKKGLEWVATISASGLRITYYPDSVKG
 RFTISRDDAKRSLFLQMTSLKSEDTATYYCARPMSAHYGFNYFDYWGQGVMTVSSastkgpsvfpla
 pcsrstsestaalgclvkdyfpepvtvswngaltsgvhtfpavlqssglylssvvtvpssslgtktytcnvdhkpsntkvdk
 rveskygppcppepapeflggpsvflfppkpkdtlmisrteptcvvvdvsqedpevqfnwyvdgvevhnaktkpree
 qfnstyrvvsvltvlhqdwlngkeykckvsnkglpssiektiskakgpprepqvytlppsqeemtknqvsltlckgfyys
 diavewesngqpennykttppvldsdgsfflysrlytdksrwqegnvfscsvmhleahnhytqkslsispkg*

VL-CLKAPPA - Protein

DIQMTQSPASLSASLGSETVITIECRTSEDIYNGLAWYQQKPGKSPQLLVYSANSL
HIGVPSRFSGSGSGTQYSLKINSIQFEDVASFYFCQQYYDYPLAFSGGTKLEIKR
 tvaapsvfifppdeqlksgtasvvcilnnfybreakvqwkvdnalqsgnsqesvteqdsdstyslsstltlska
 dyekhkvyacevthqglsspvtksfnrgec*

Figure 11

12 /28

Fc sequences**Human IgG1** (Uniprot P01857):

ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
AVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTC
PPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYV
DGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPI
EKTISKAKGQPREPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQ
PENNYKTTTPVLDSGDSFFLYSKLTVDKSRWQQGNVFCSSVMHEALHNHYTQ
KSLSLSPGK

Human IgG2 (Uniprot P01859):

ASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSVVTVPSSNFGTQTYTCNVDHKPSNTKVDKTKVERKCCVECPPC
PAPPVAGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVQFNWYVDGVE
VHNAKTKPREEQFNSTFRVVSVLTVVHQDWLNGKEYKCKVSNKGLPAPIEKTIS
KTKGQPREPQVYTLPPSREEMTKNQVSLTCLVKGFYPSDISVEWESNGQPENN
YKTTTPMLDSGDSFFLYSKLTVDKSRWQQGNVFCSSVMHEALHNHYTQKSLS
LSPGK

Human IgG4 (Uniprot P01861):

ASTKGPSVFPLAPCSRSTSESTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPA
VLQSSGLYSLSSVVTVPSSSLGTQTYTCNVDHKPSNTKVDKRVESKYGPCCPSCP
APEFLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVDSQEDPEVQFNWYVDGVE
VHNAKTKPREEQFNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTIS
KAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSDIAVEWESNGQPEN
NYKTTTPVLDSGDSFFLYSRLTVDKSRWQEGNVFCSSVMHEALHNHYTQKSLS
LSLGK

Rat IgG1 (Uniprot P20759) used in N13B2

AETTAPSVYPLAPGTALKSNSMVTLGCLVKGYFPEPVTVTWNSGALSSGVHTFPA
AVLQSGLYTLTSSVTVPSSTWPSQTVTCNVAHPASSTKVDKKIVPRNCGGDCKP
CICTGSEVSSVFIFPPKPKDVLITLTPKVTCVVDISQDDPEVHFSWFVDDDEV
HTAQTRPPEEQFNSTFRSVSELPILHQDWLNGRTRFRCKVTSAAFPSPIEKTISKP
EGRTQVPHVYTMSPTEEMTQNEVSITCMVKGFYPPDIYVEWQMNGQPQE
NYKNTPPTMDTDGSYFLYSLNVKKEKWQQGNTFTCSVLHEGLHNHHTKSL
SHSPGK

Figure 12

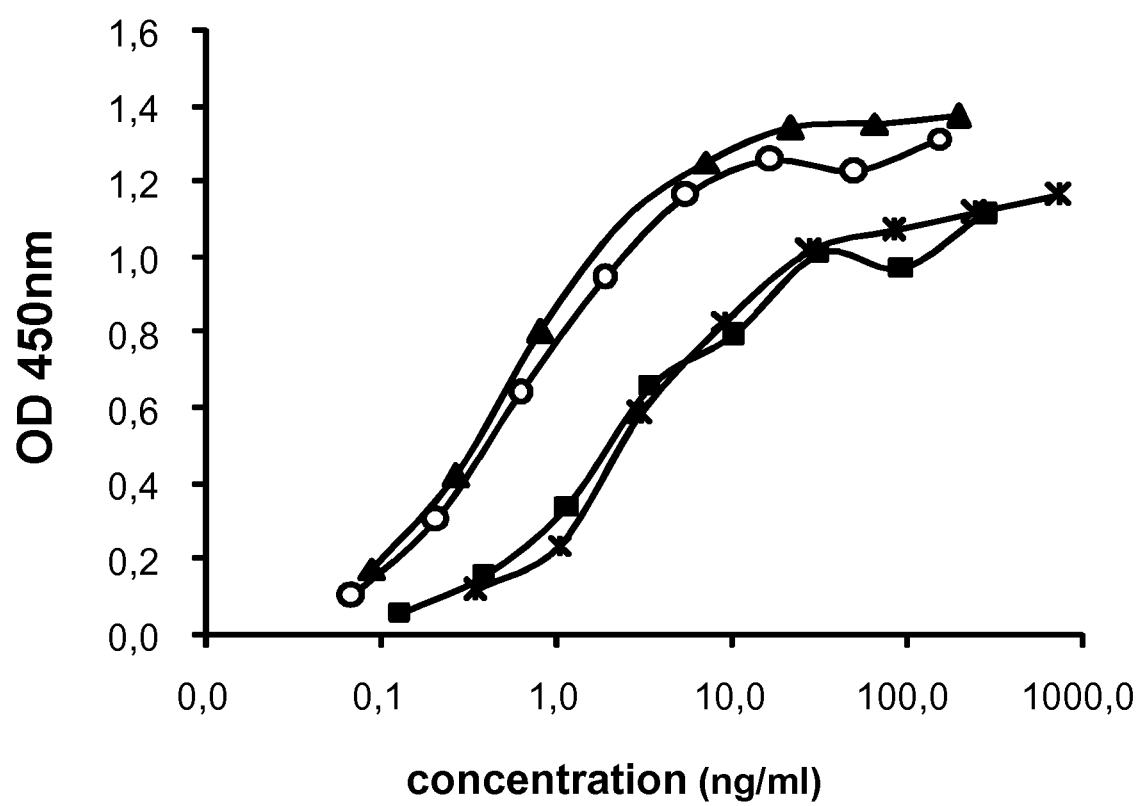


Figure 13

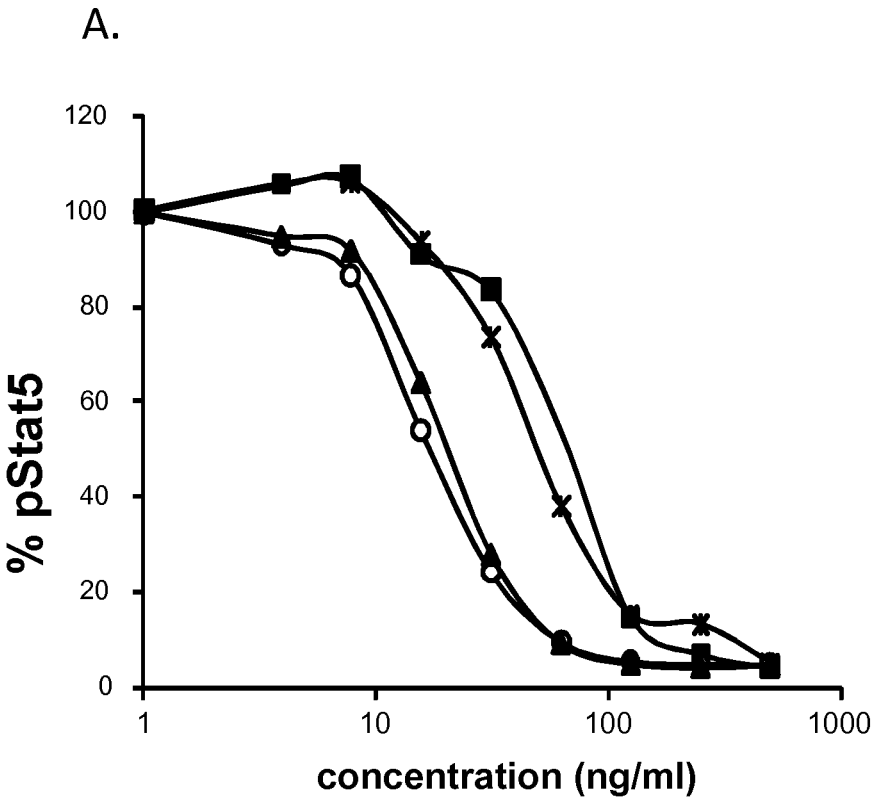
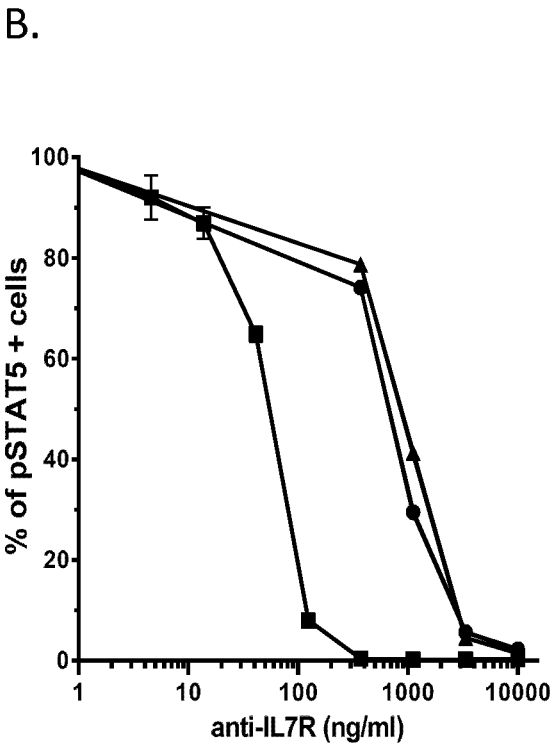


Figure 14

15 / 28

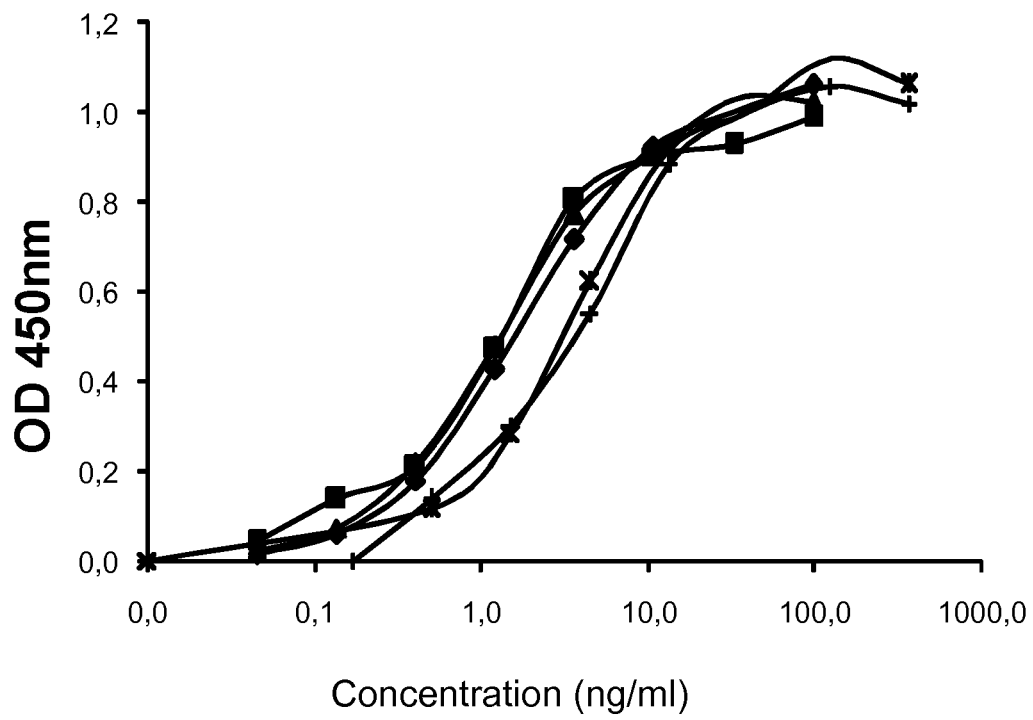
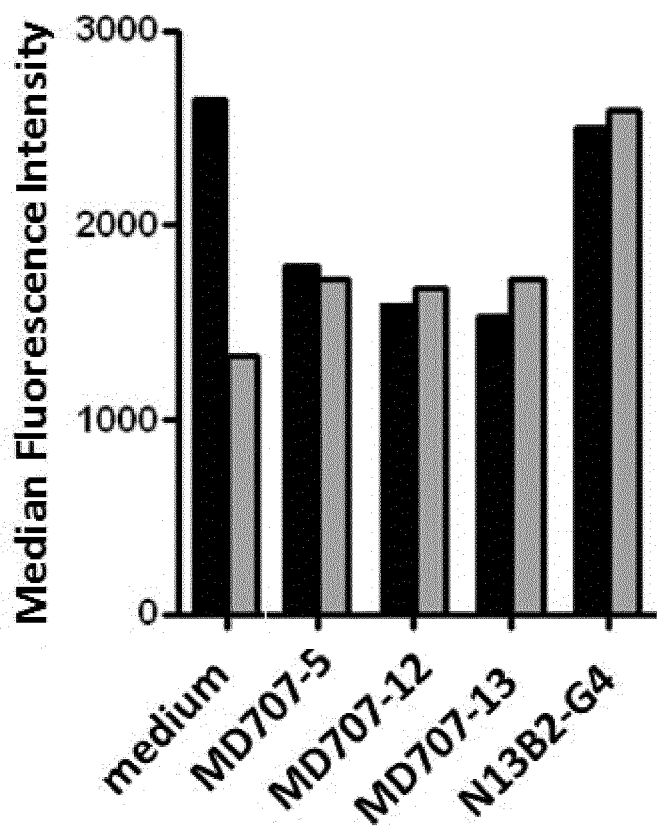
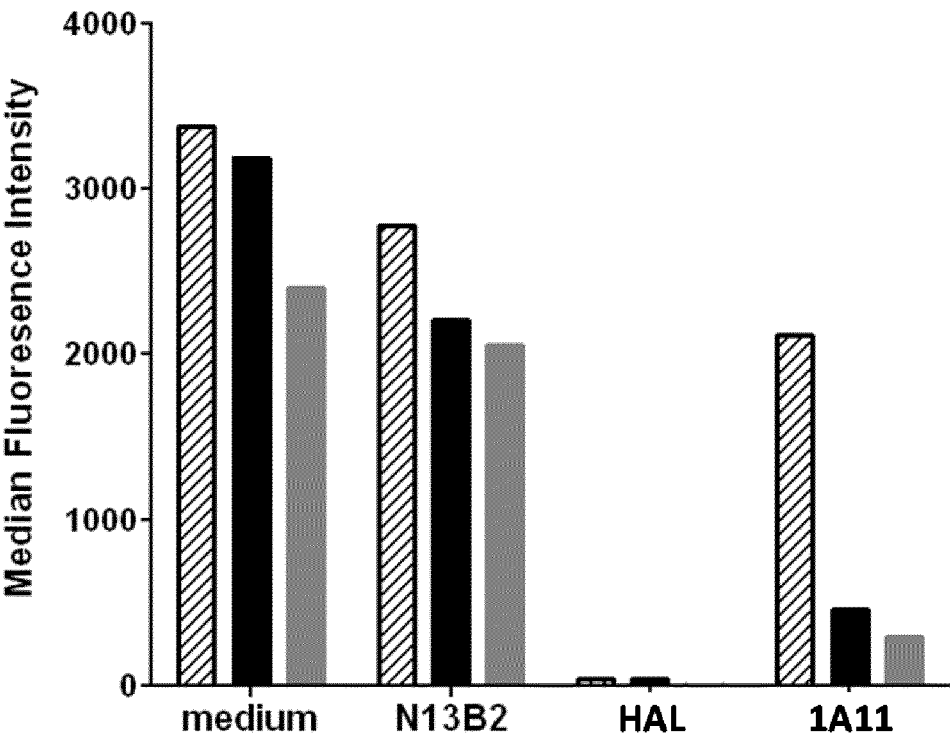


Figure 15

A.

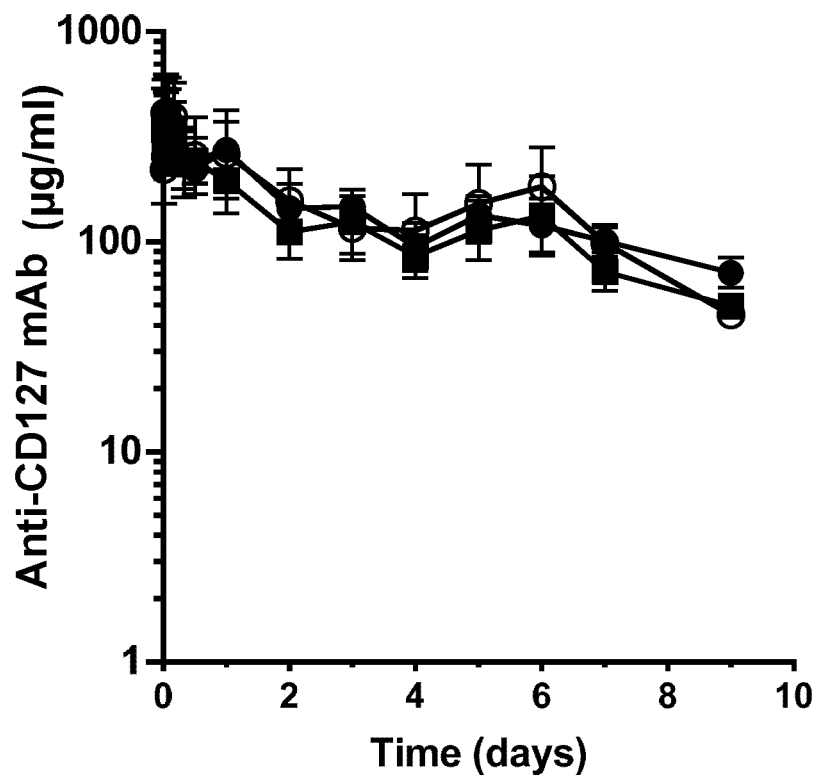


B.



17 / 28

A.



B.

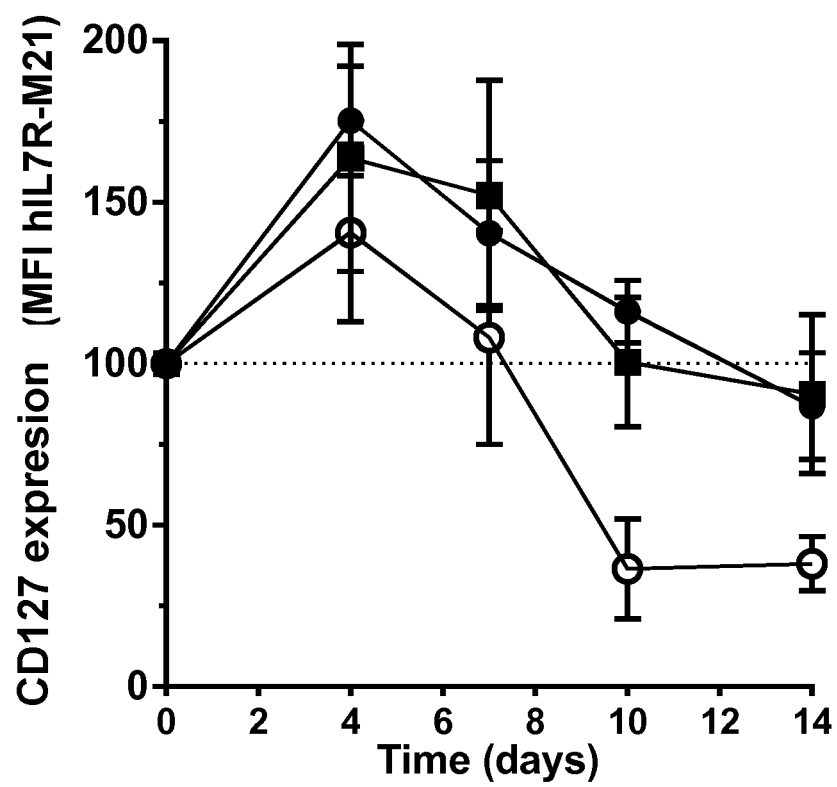


Figure 17

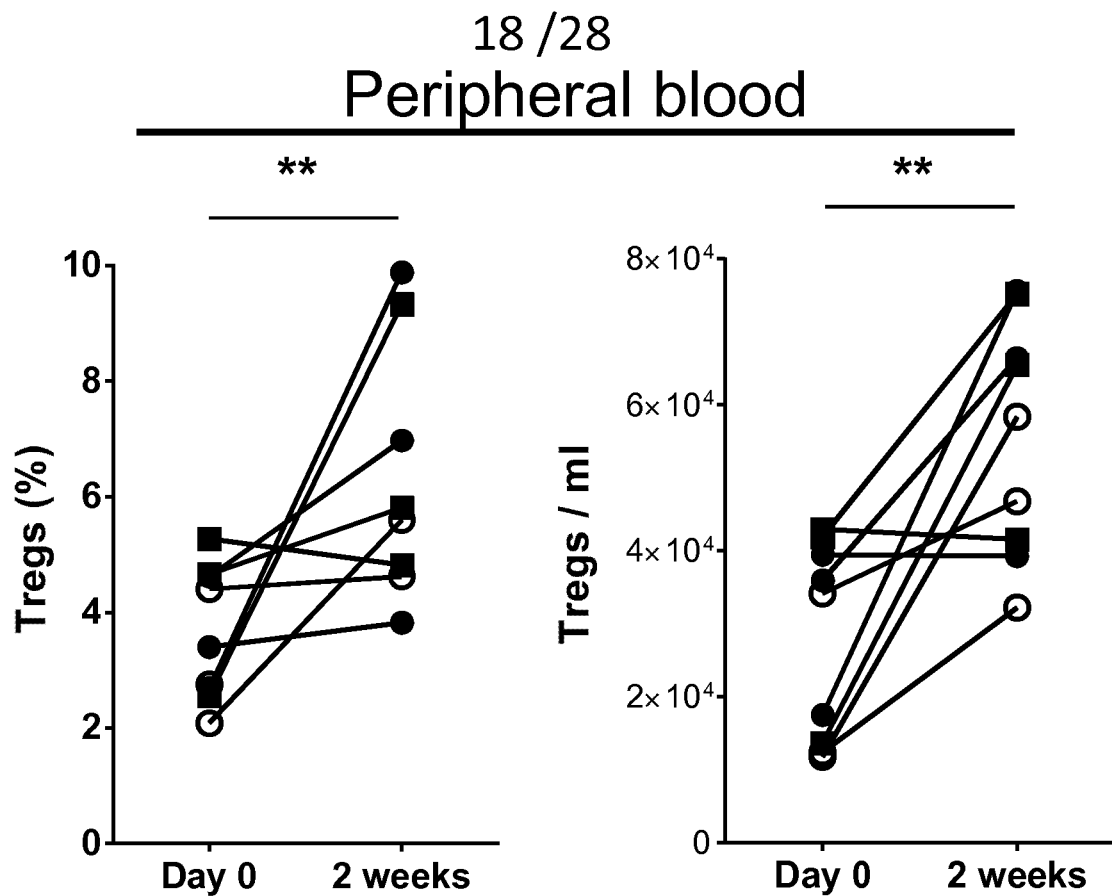
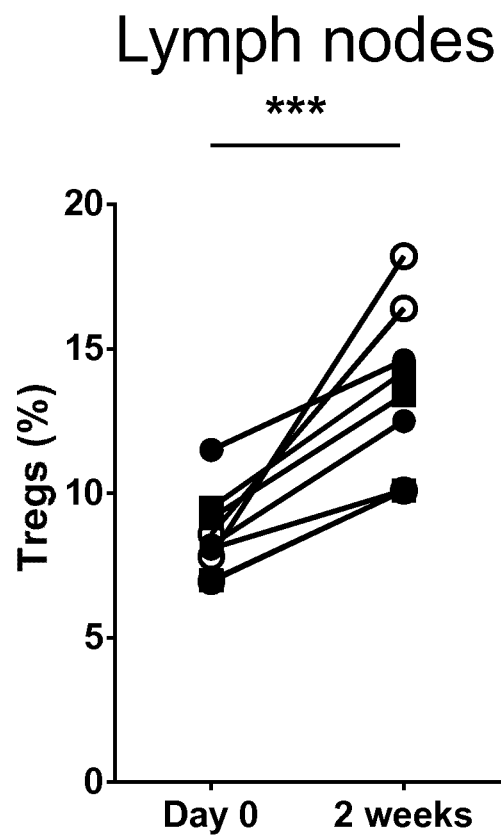


Figure 18

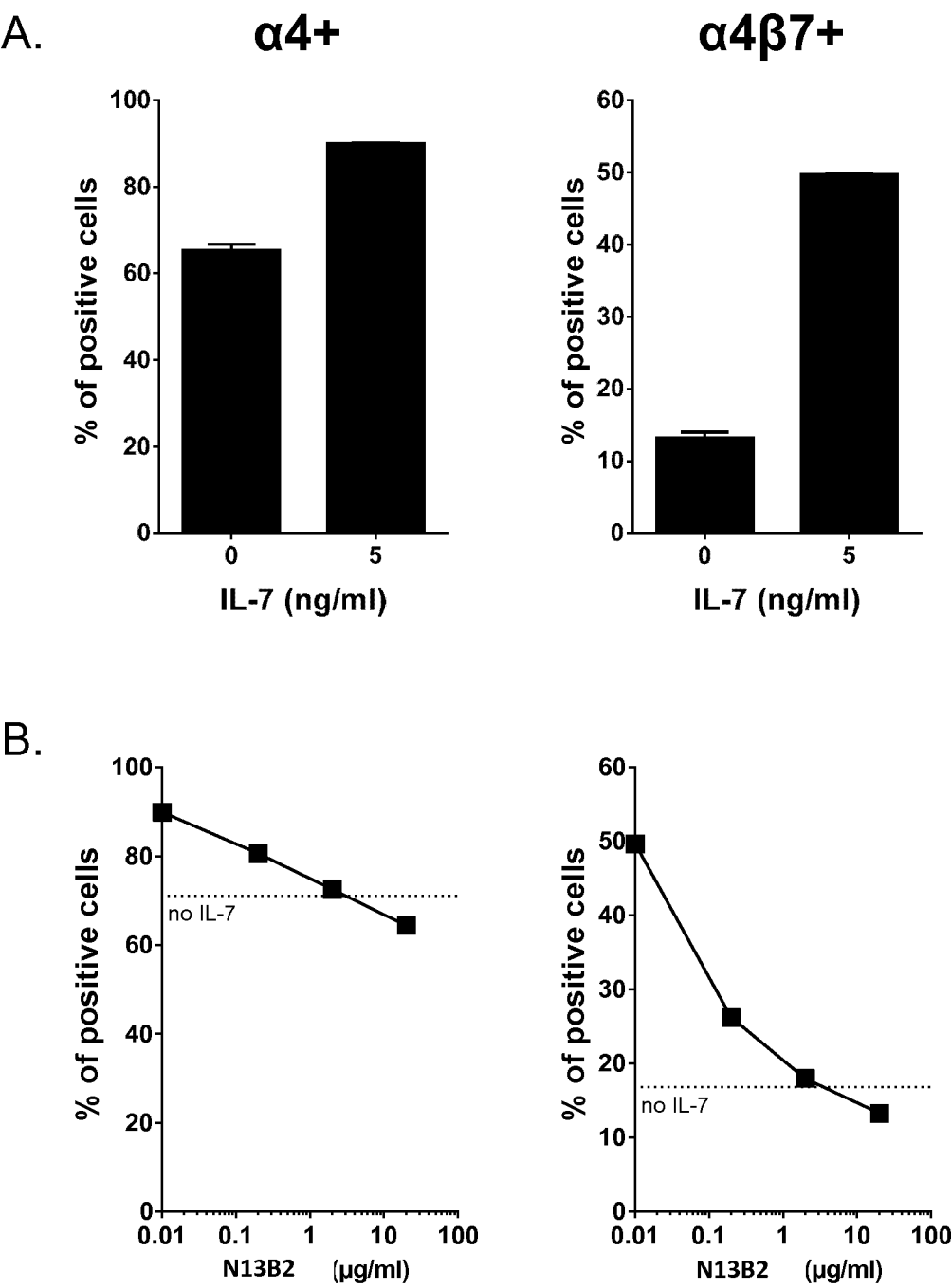


Figure 19

20 / 28

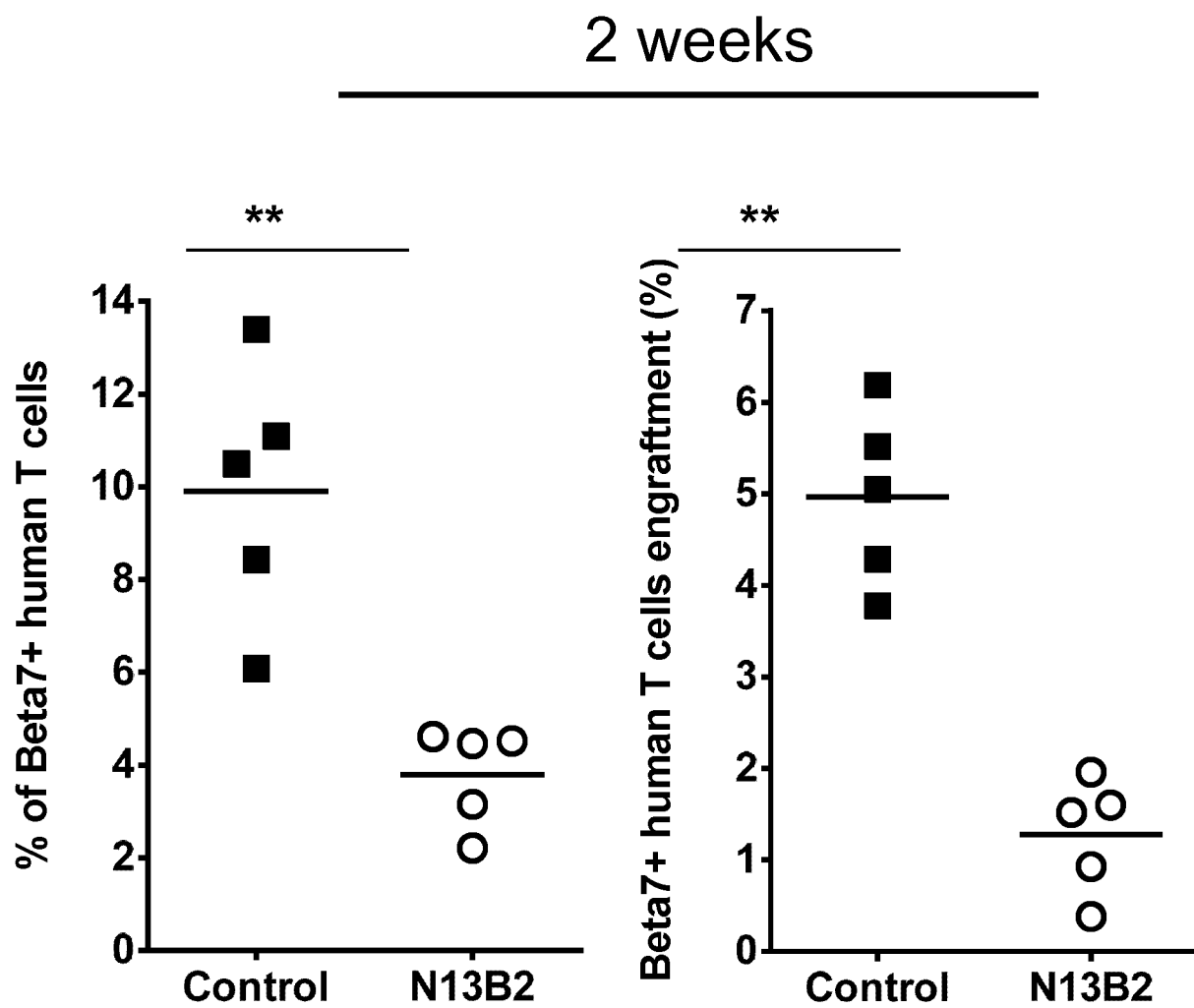


Figure 20

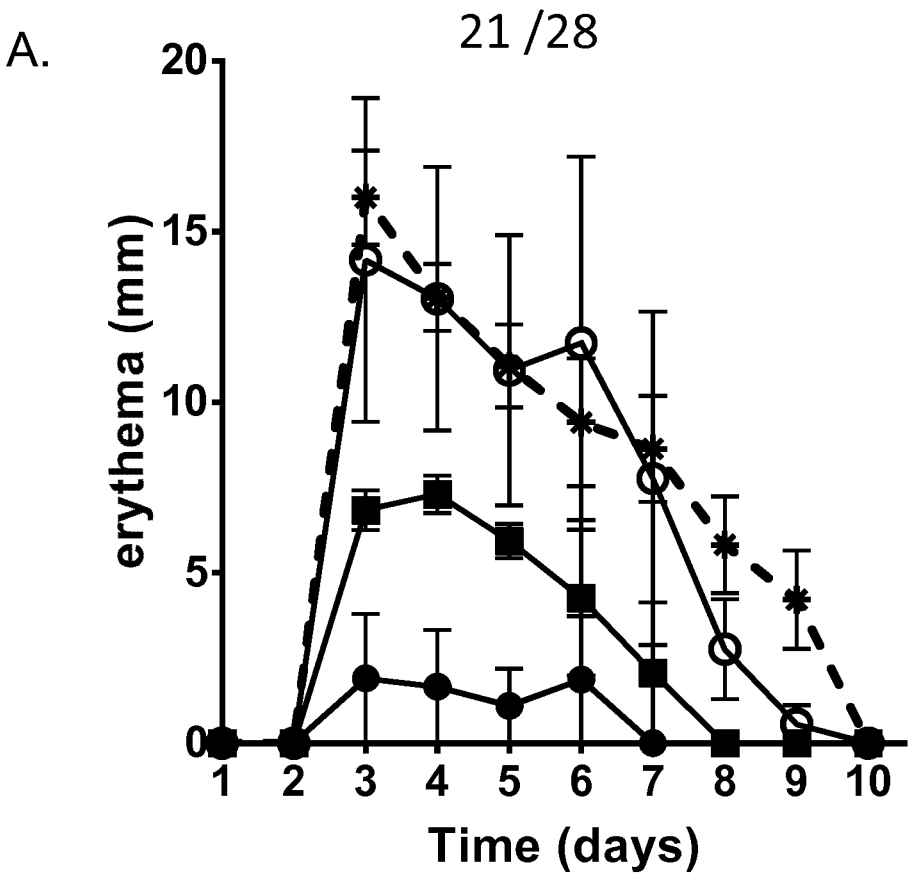
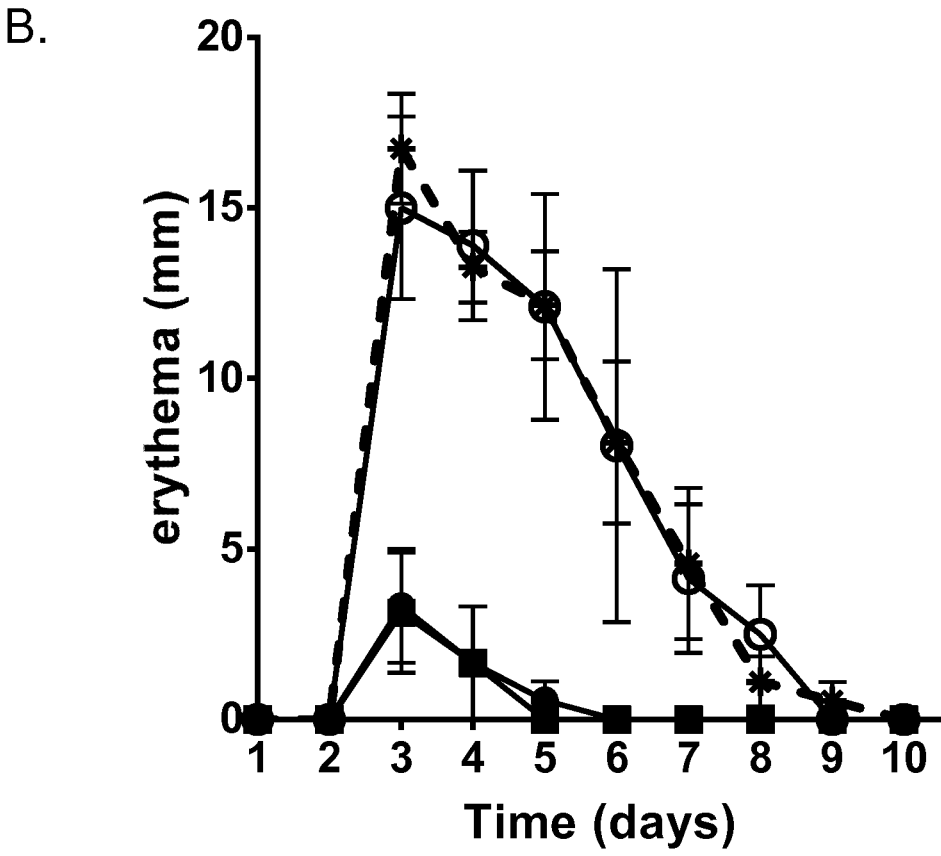


Figure 21

22 / 28

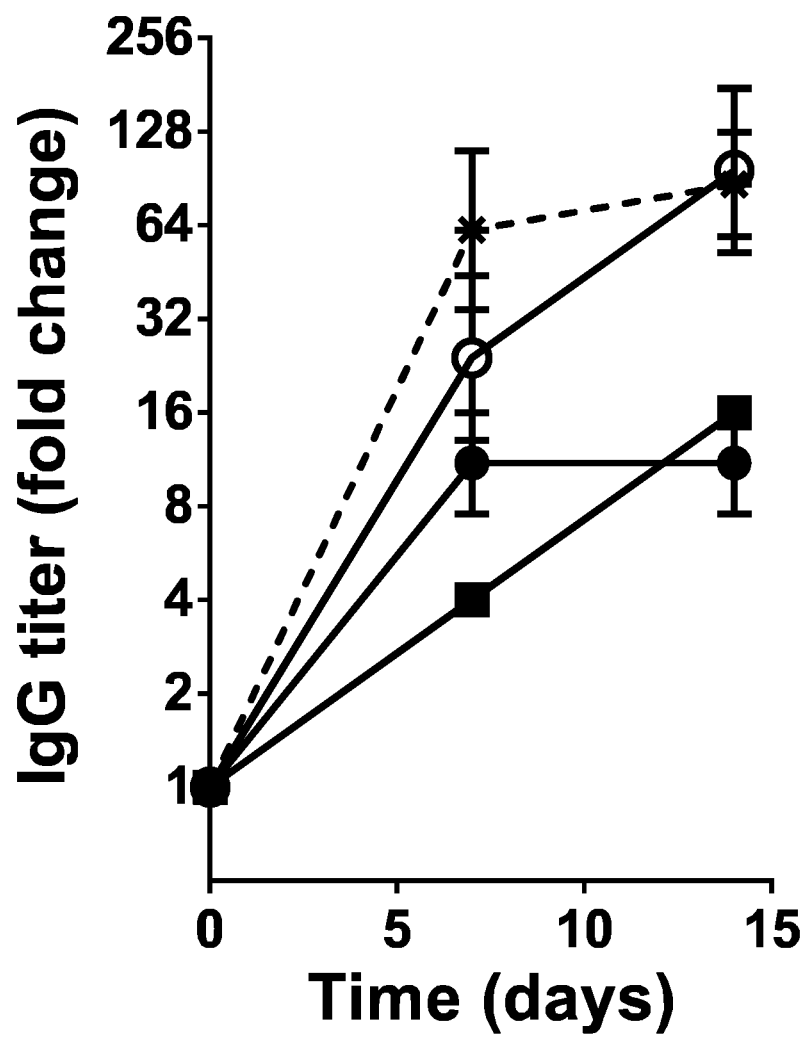


Figure 22

23 /28

QVQLVESGGGLVKPGGSLRLSCAVSGFTLSDY~~Y~~MAWIRQAPG
KGLEWVSTISASGLRTYYPDSVKGRFTISRDNAKNSLYLQMNS
LRAEDTAVYYCARPLSAHYGFNYFDYWGGQGLTVTVSSASTKGP
SVFPLAPCSRSTSESTAALGCLVKDYFPEPVTVSWNSGALTSGV
HTFPAVLQSSGLYSLSSVVTVPSSSLGTKYTCNVDHKPSNTKV
DKRVESKYGPPCPPCPAPEFLGGPSVFLFPPKPKDTLMISRTPE
VTCVVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREEQFNST
YRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKTISKAKGQ
PREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSDIAVEWESNG
QPENNYKTTTPVLDSDGSFFLYSRLTVDKSRWQEGNVFSCSV
MHEALHNHYTQKSLSLSPGK*

Figure 23

24 /28

EIVMTQSPATLSVSPGERATLSCRTSEDIYQGLAWYQQKPGQA
PRLLISANTLHIGIPARFSGSGSGTEFTLTISSLQSEDFAVYYCQ
QYYDYPLAFGGGTKVEIKTVAAPSVFIFPPSDEQLKSGTASVVC
LLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYSLS
STLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC*

Figure 24

25 / 28

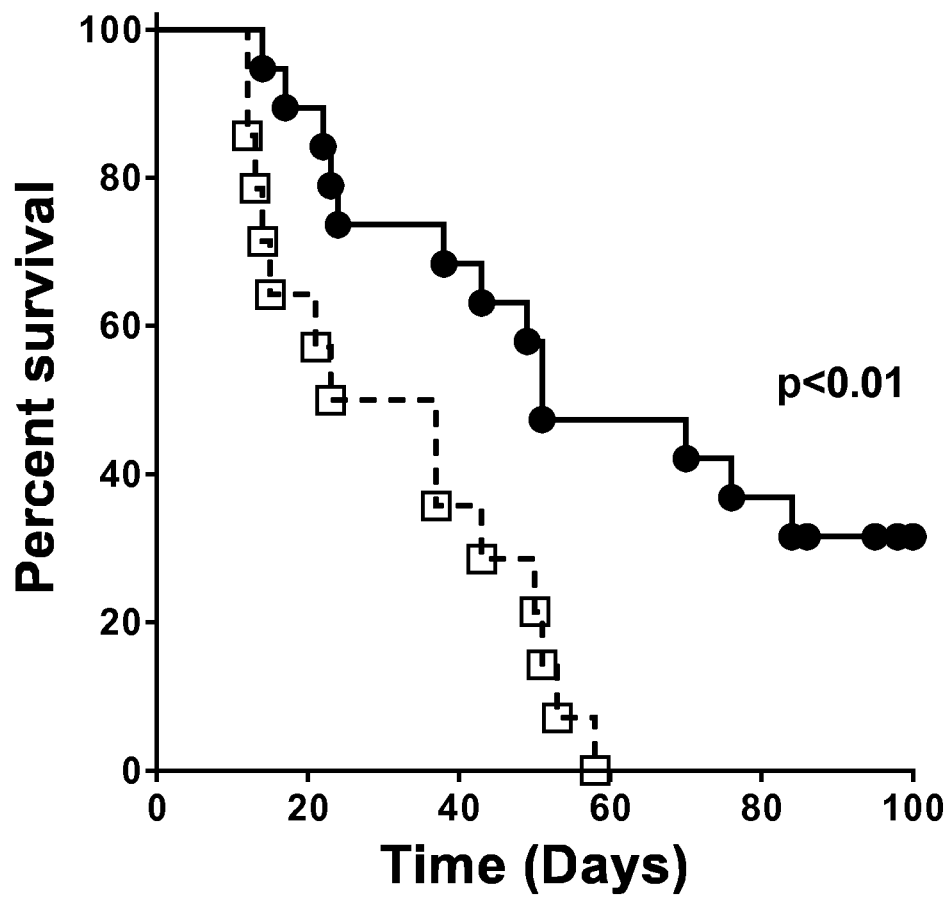


Figure 25

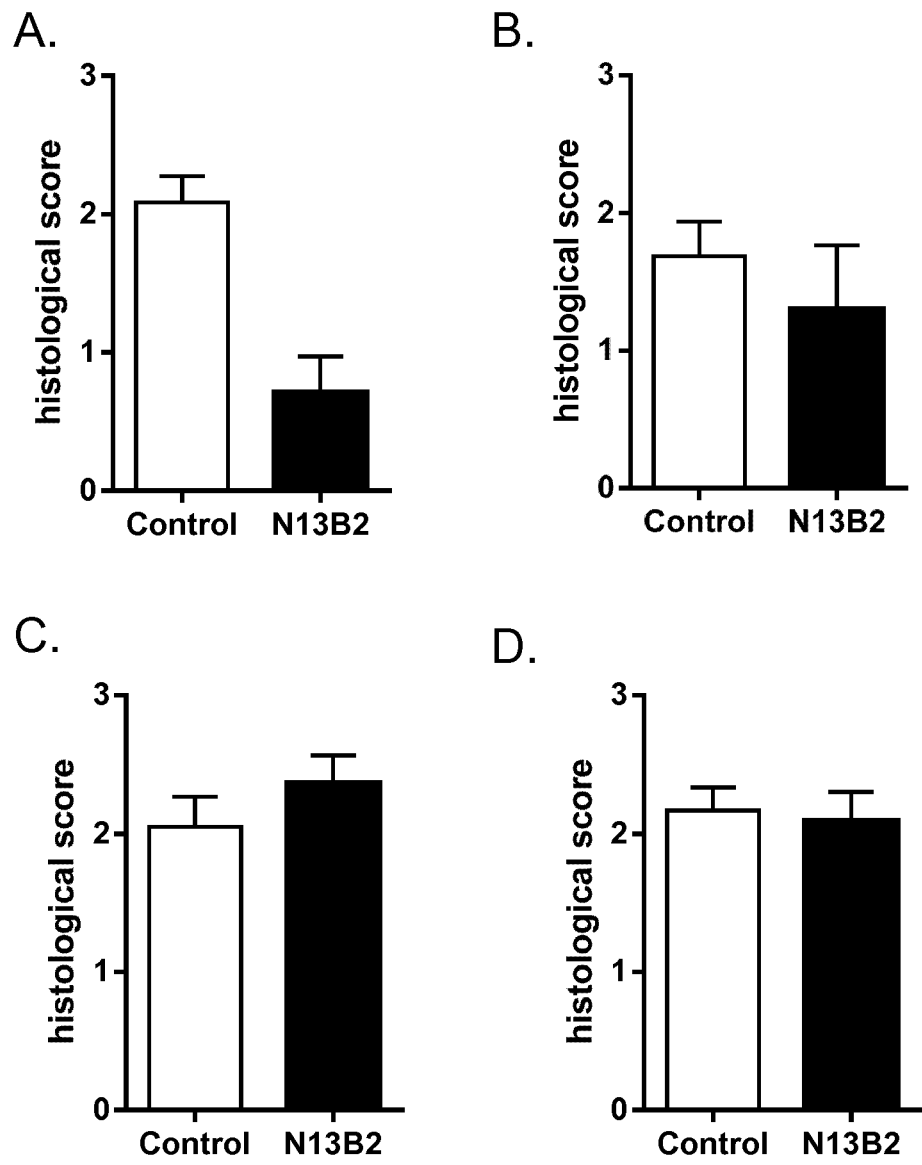


Figure 26

27 /28

MTILGTTFCMVFSLLQVVS~~GES~~GYAQNGDLEDAELDDYSFS
CYSQLEVNGSQHSLTCAFEDPDVNTTNLEFEICGALVEVKC
LNFRKLQEIIY**FIETKKF**LLIGKSNICVKVGEKSLTCKKIDL
TTIVKPEAPF**DLSVIY**REGANDEFVVTFNTSHLQKKYVKVLM
HDVAYRQEKDENKWTHVNLSSTKLTLLQORKLQPAAMYEIKV
RSIPDHY**FKGF**WSEWSPSYFRTPEINNSSGEMDPILLTIS
ILSFFSVALLVILACVLWKKRIKPIVWPSLPDHKKTLEHLC
KKPRKNLNVSFNPESFLDCQIHRVDDIQARDEVEGFLQDTF
PQOLEESEKQRLGGDVQSPNCPSDEVVITPESFGRDSSLTC
LAGNVSACDAPILSSSRSLDCRESGKN~~GP~~PHVYQDLLLSLGT
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MSSFYQNQ

Figure 27

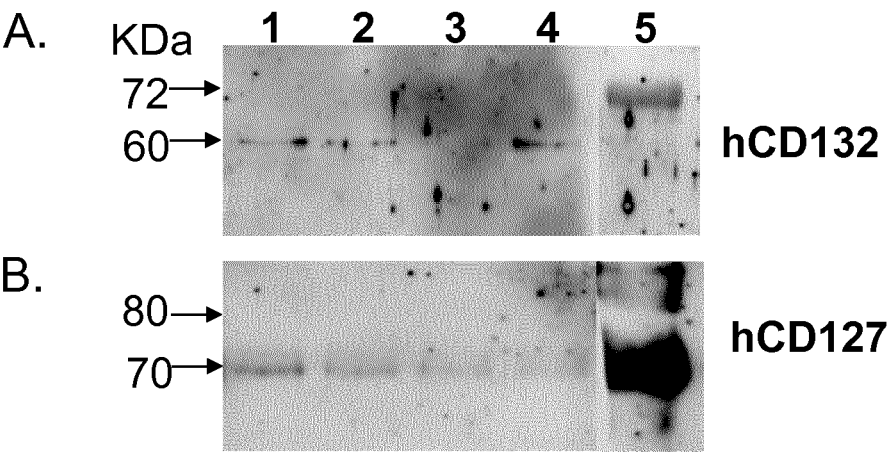


Figure 28