

Fig1A_comparative cell binding

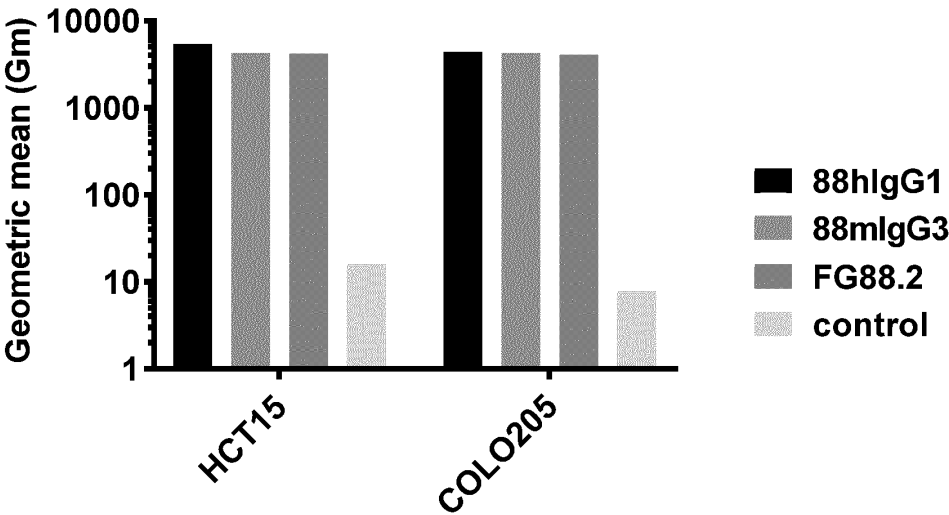


Figure 1A

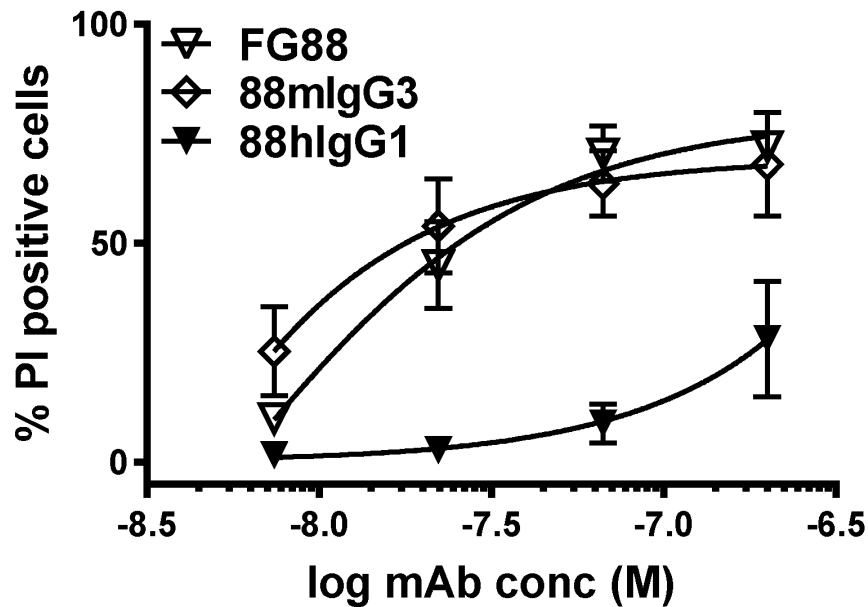


Figure 1B

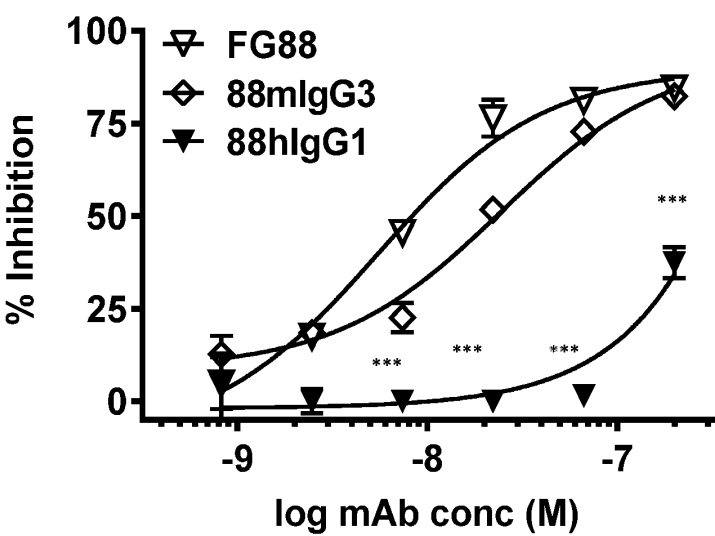


Figure 1C

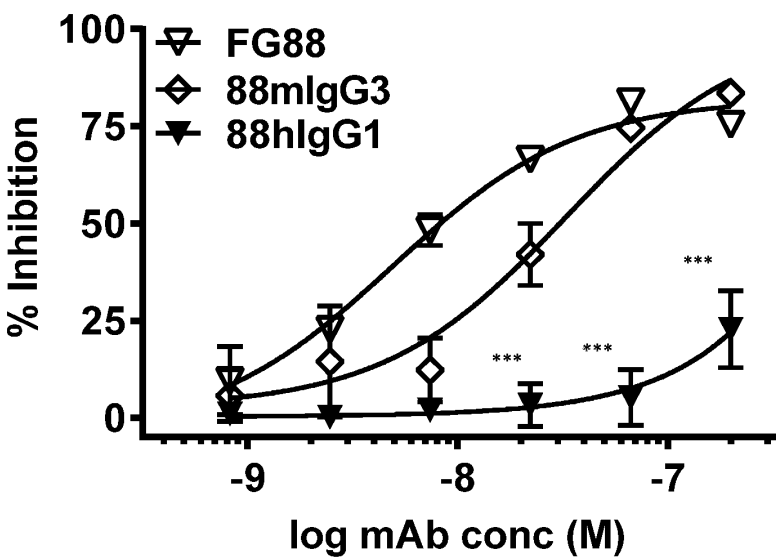


Figure 1D

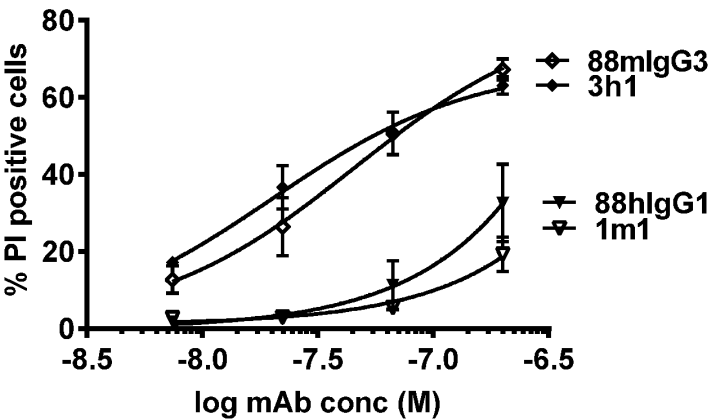


Figure 2A

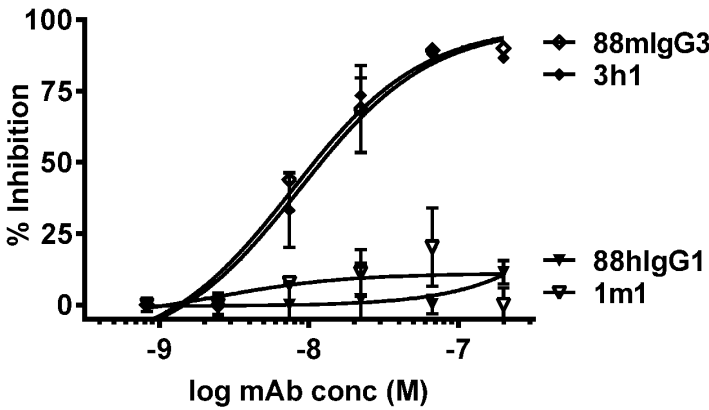


Figure 2B

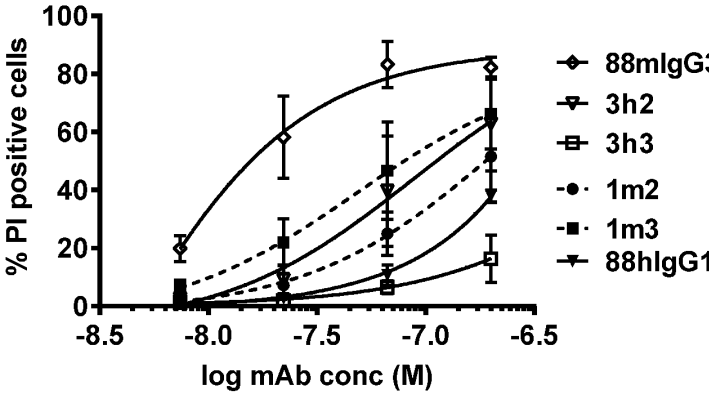


Figure 2C

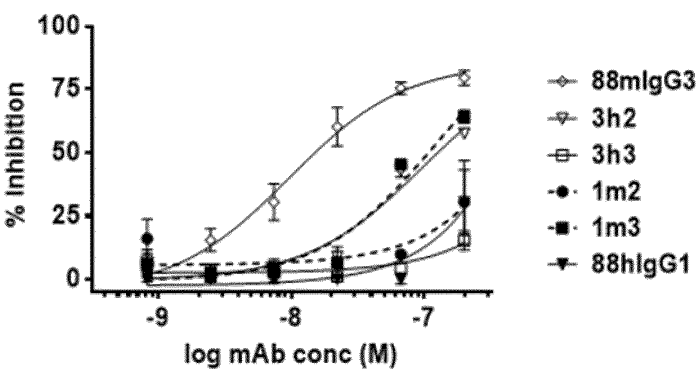


Figure 2D

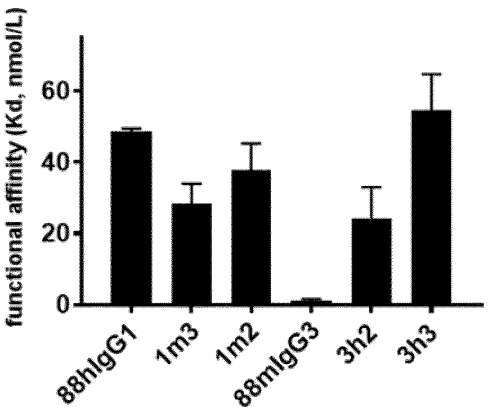


Figure 2E

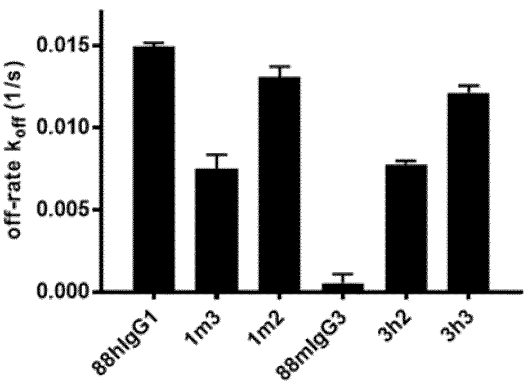


Figure 2F

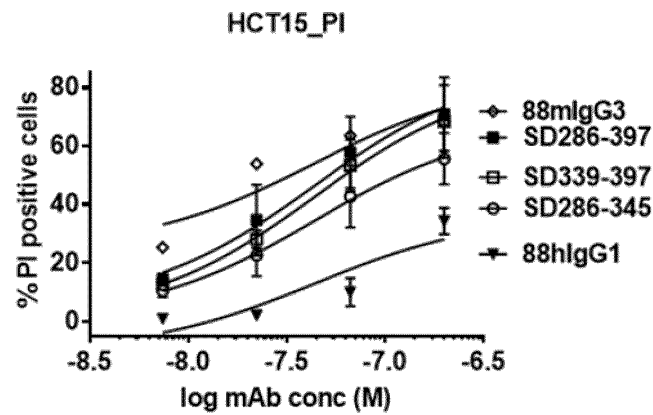


Figure 3A

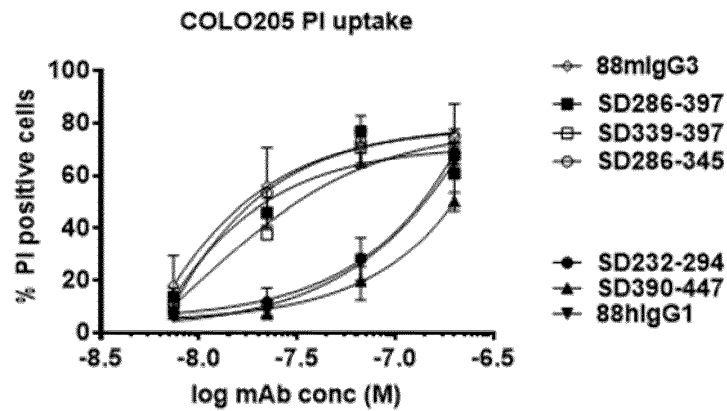


Figure 3B

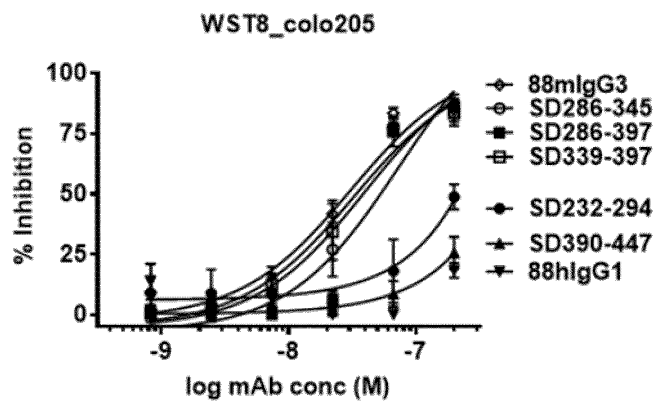


Figure 3C

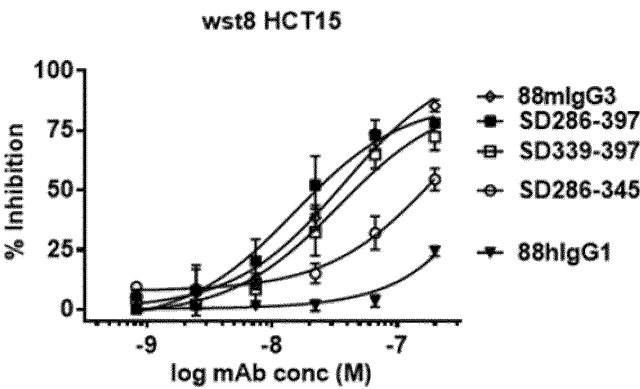


Figure 3D

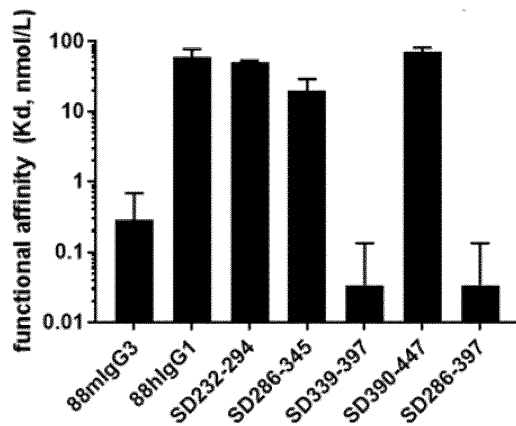


Figure 3E

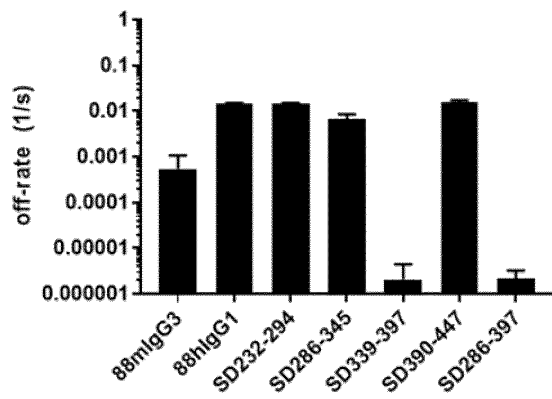


Figure 3F

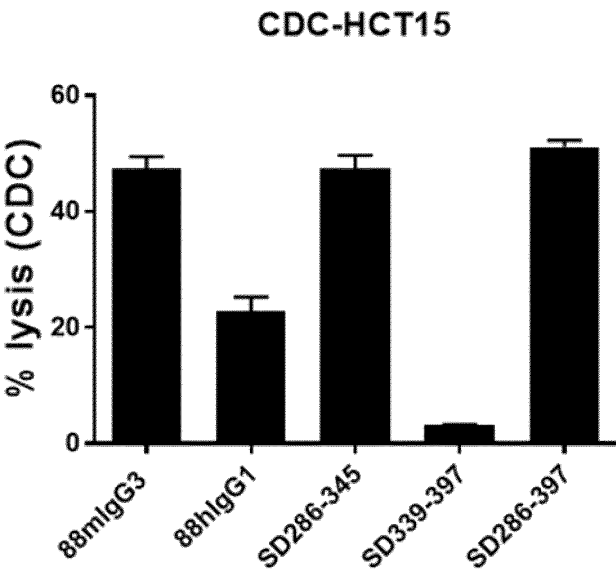


Figure 3G

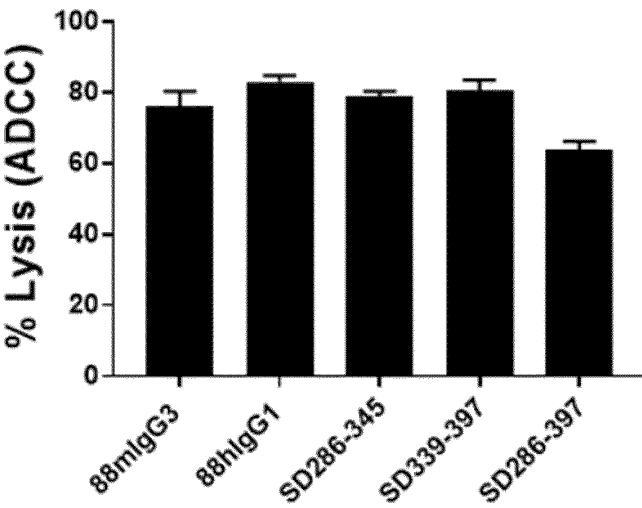


Figure 3H

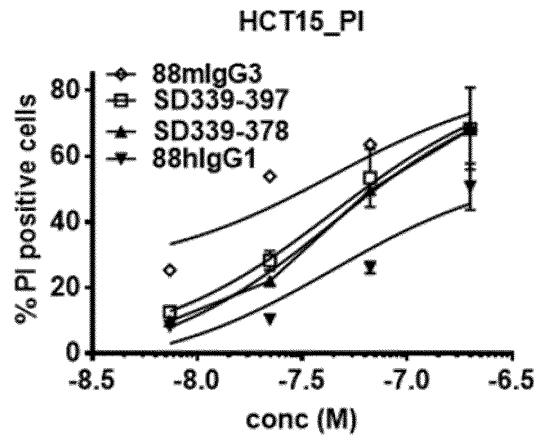


Figure 4A

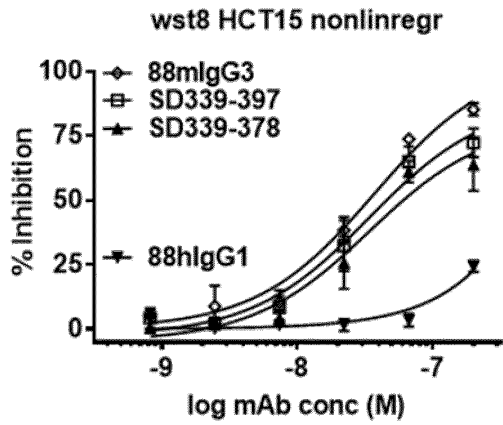


Figure 4B

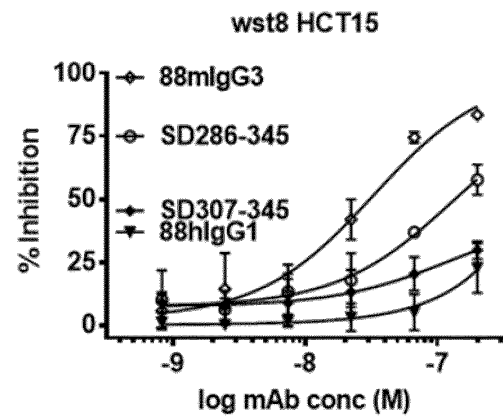


Figure 4C

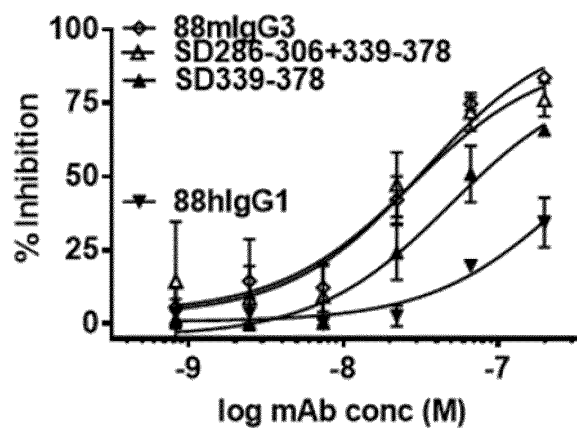


Figure 4D

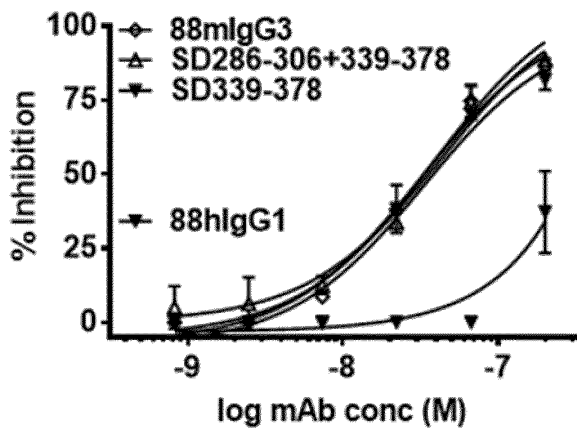


Figure 4E

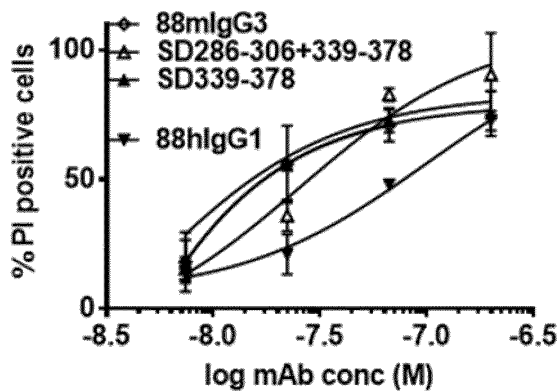


Figure 4F

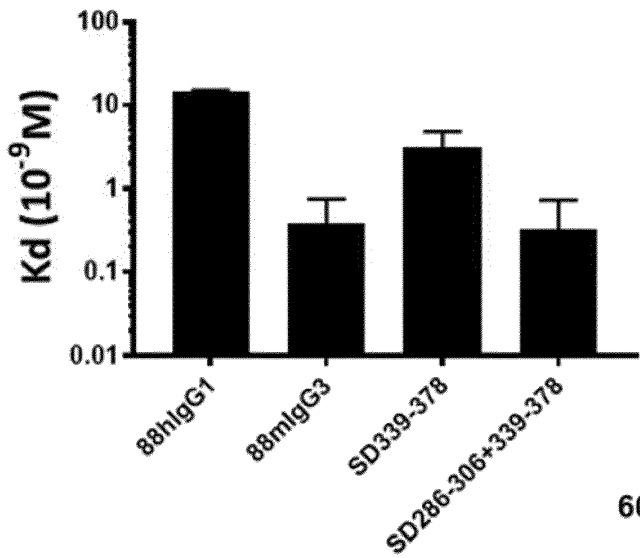


Figure 4G

Figure 4H

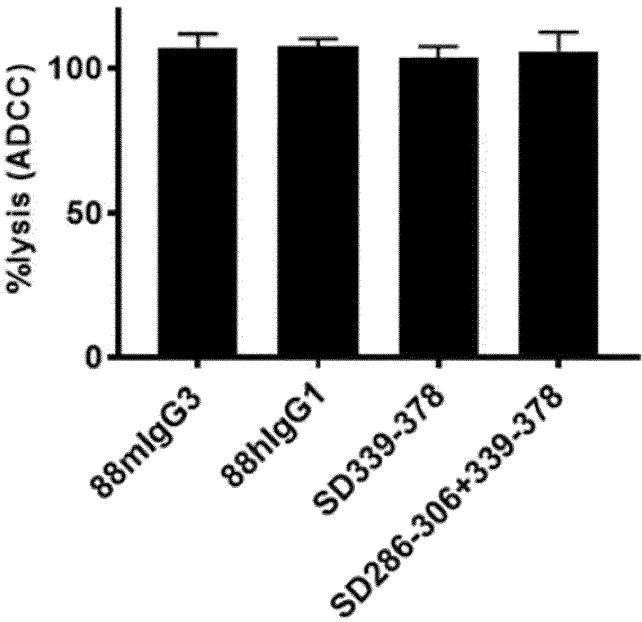
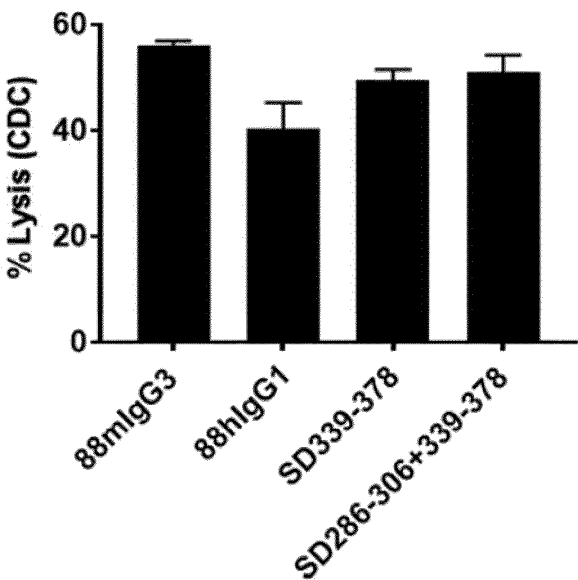
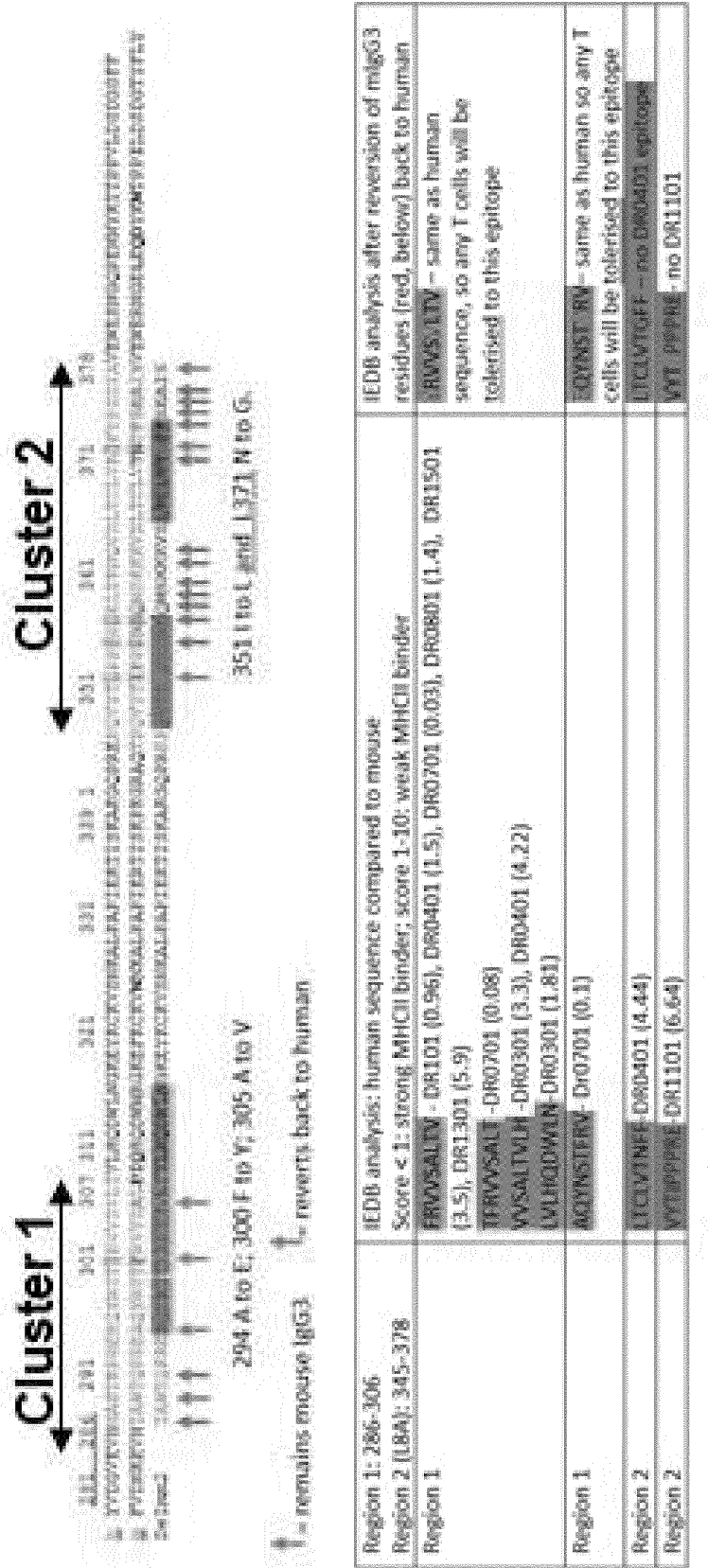


Figure 4I



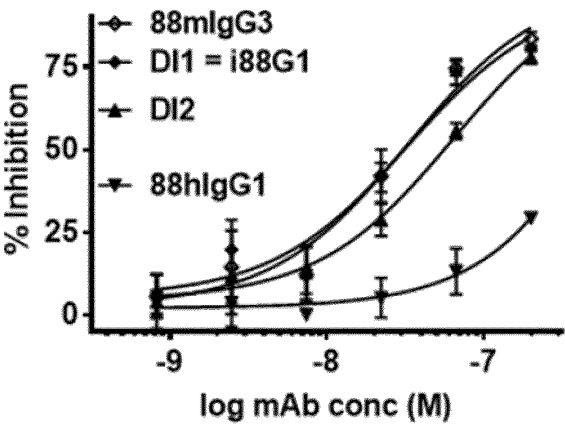


Figure 6A

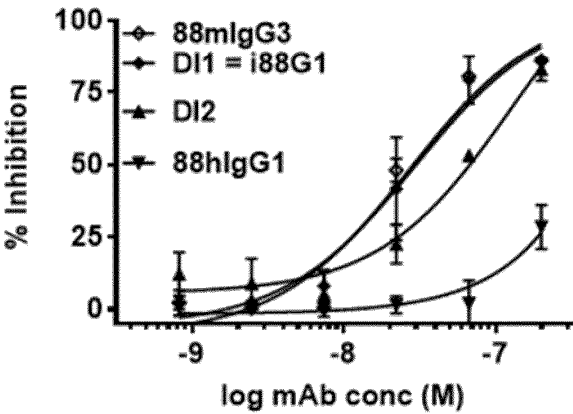


Figure 6B

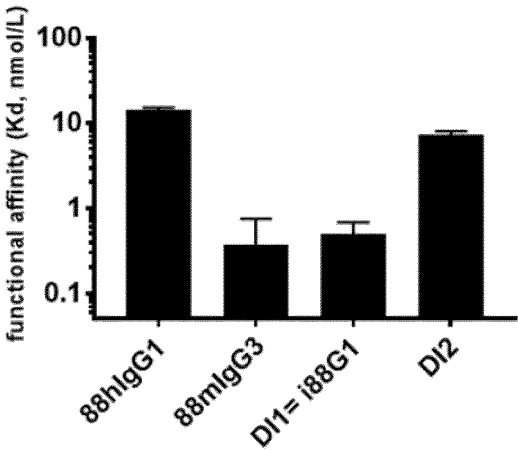


Figure 6C

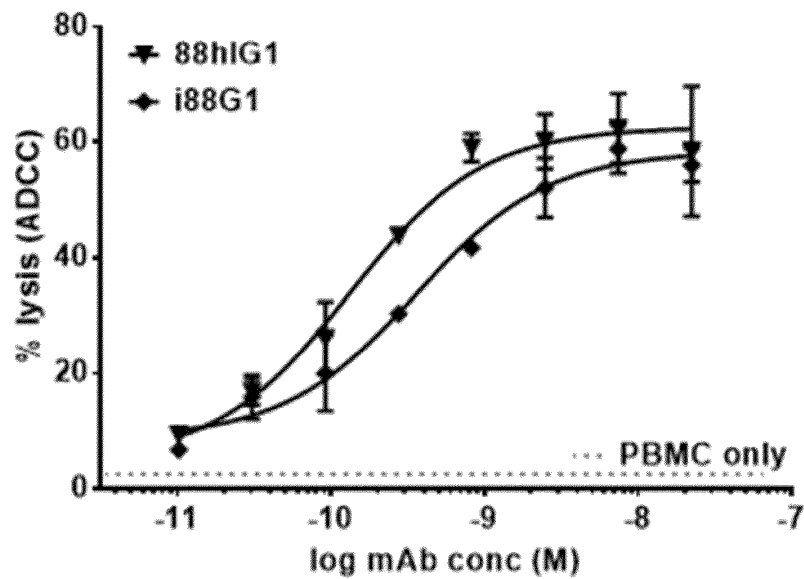


Figure 6D

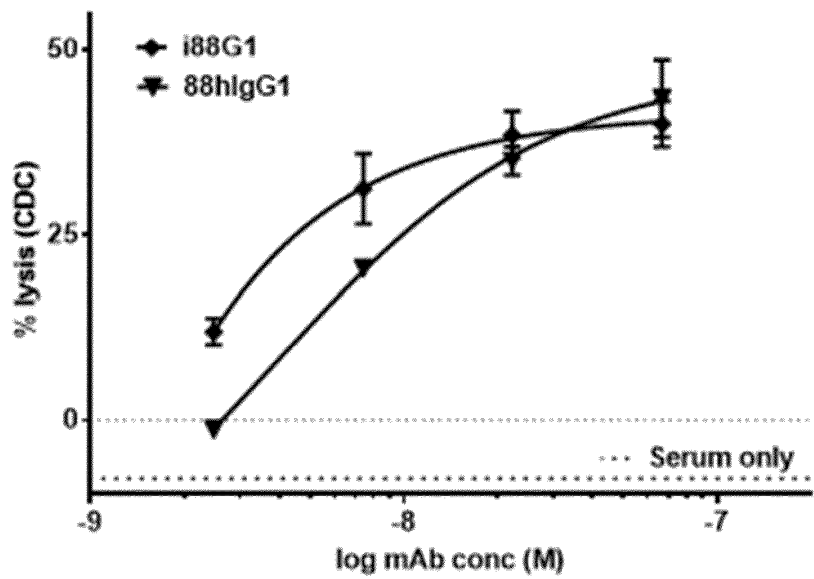


Figure 6E

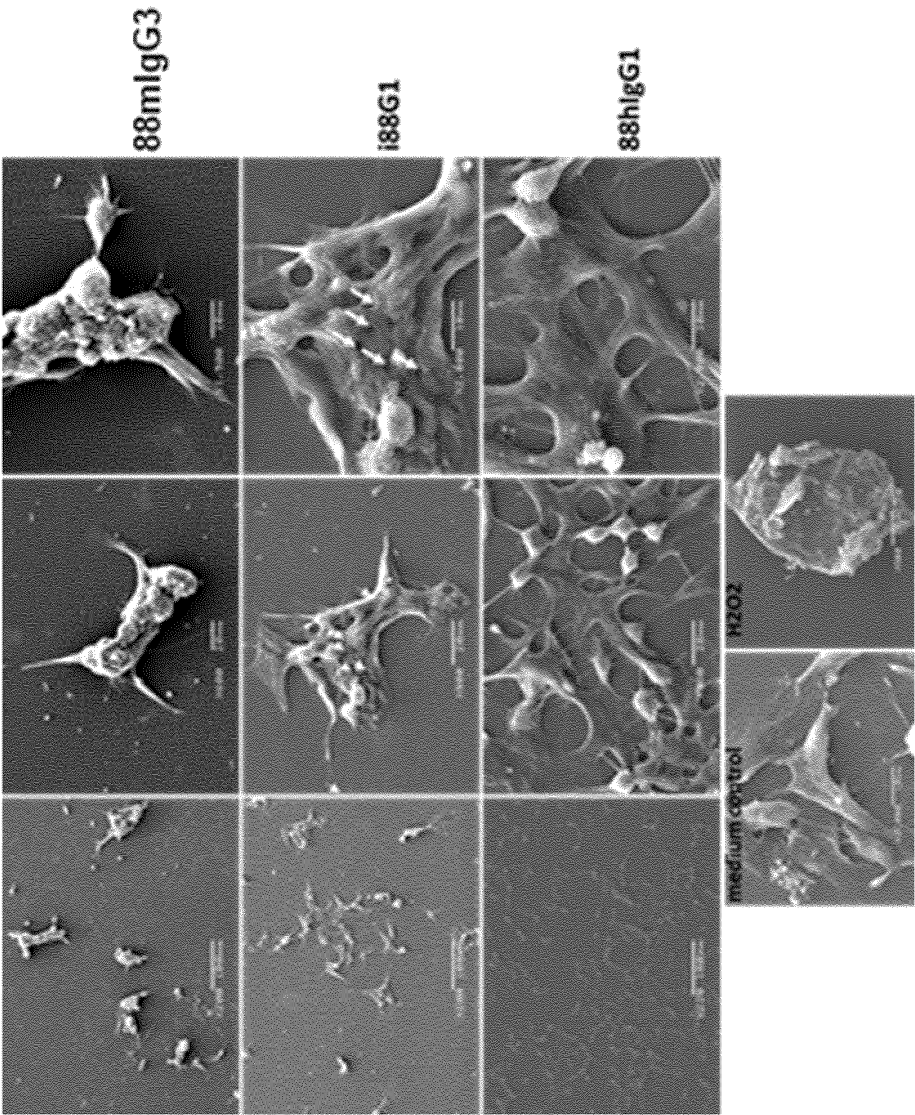


Figure 6F

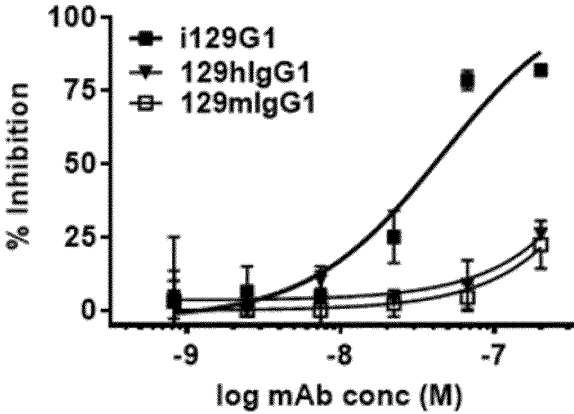


Figure 7A

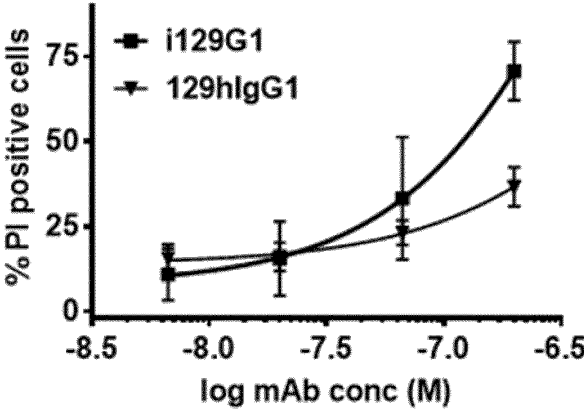


Figure 7B

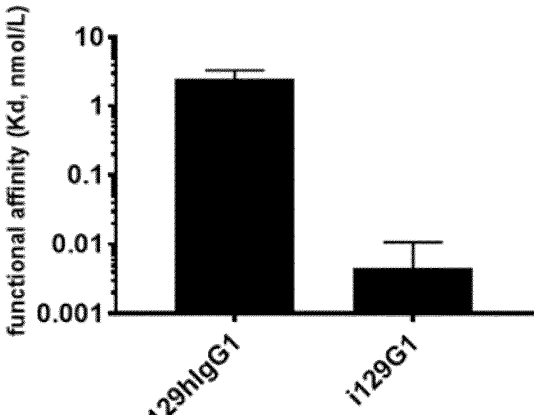


Figure 7C

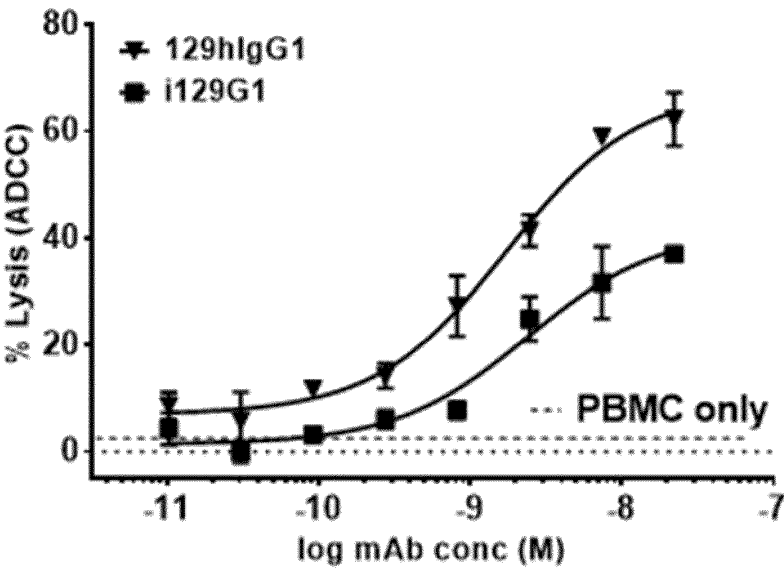


Figure 7D

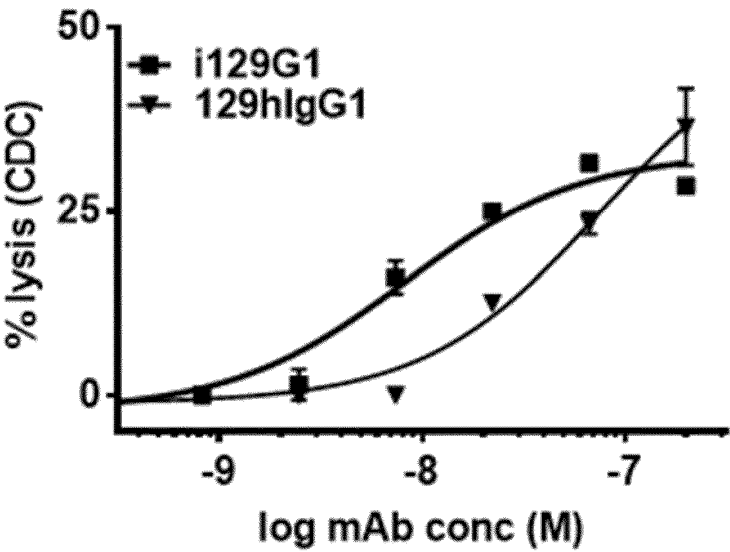


Figure 7E

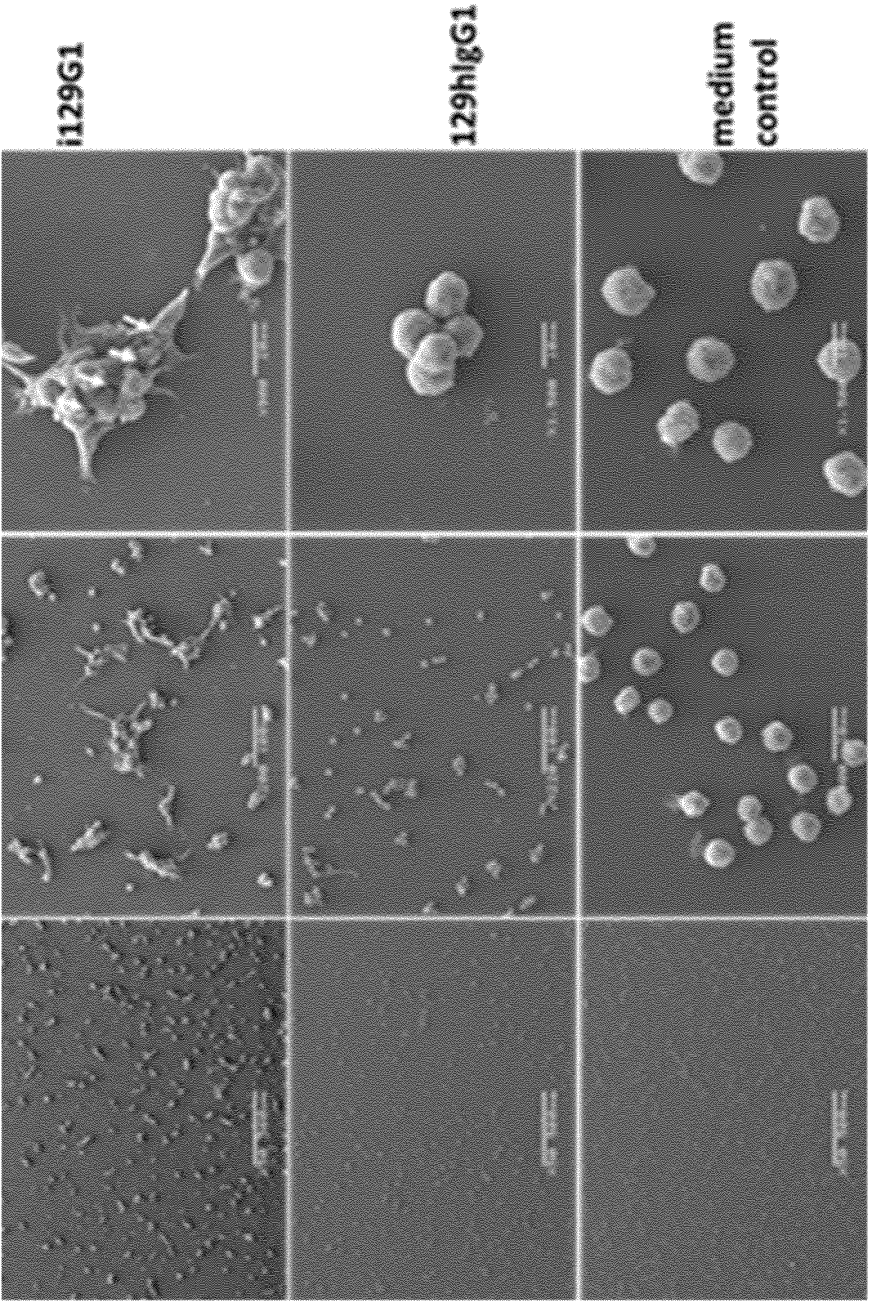


Figure 7F

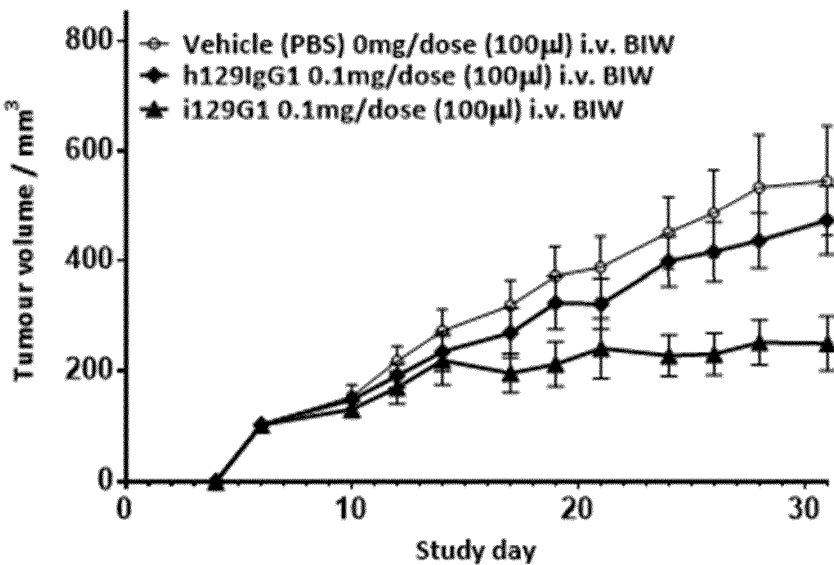


Figure 7G

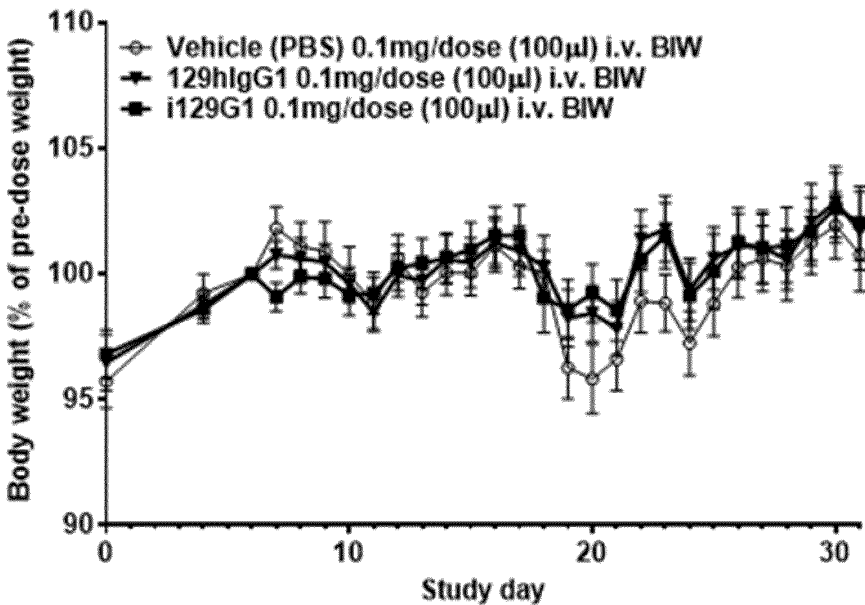


Figure 7H

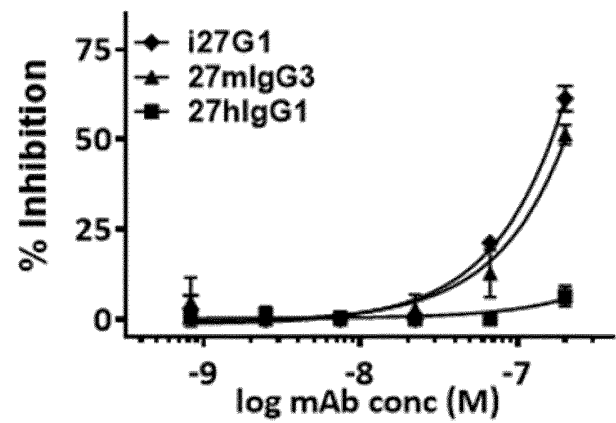


Figure 8A

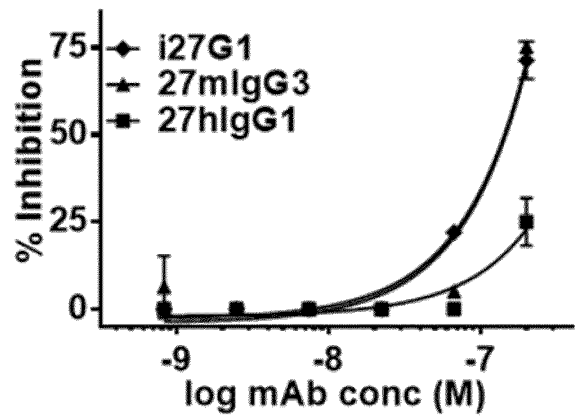


Figure 8B

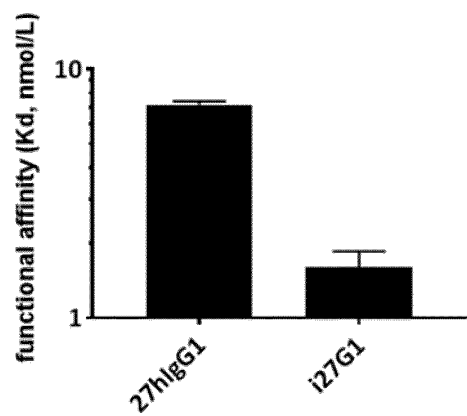


Figure 8C

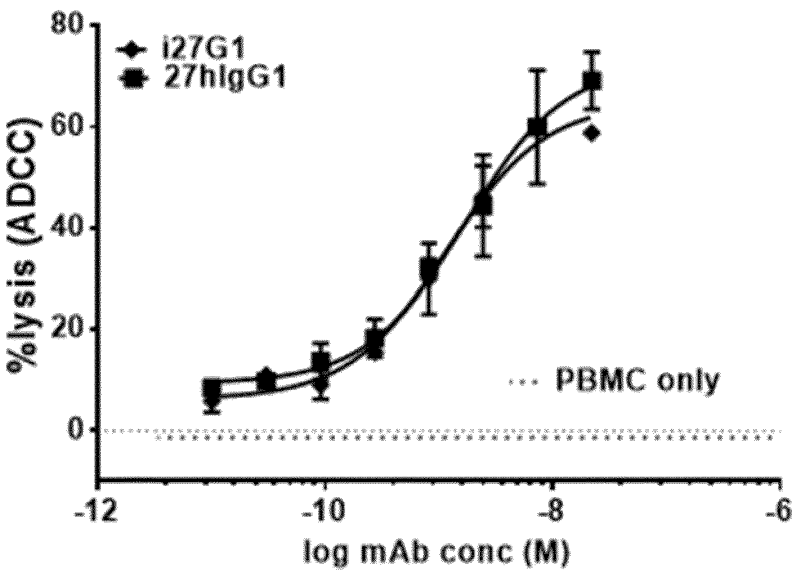


Figure 8D

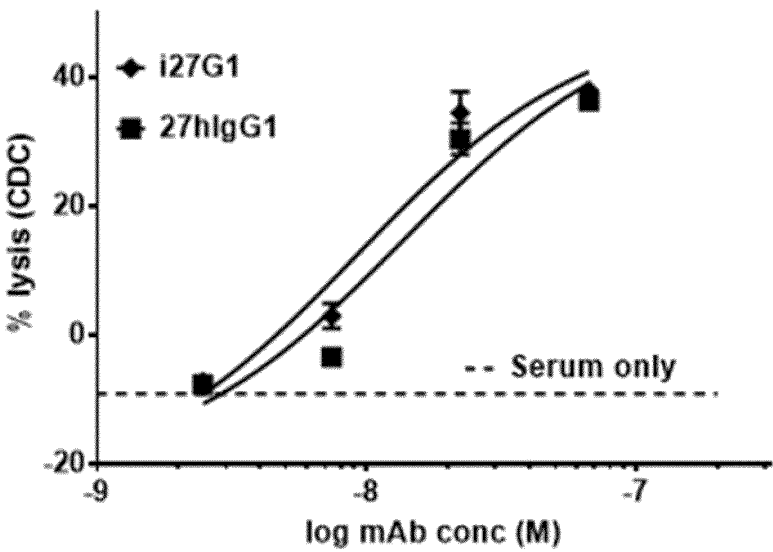


Figure 8E

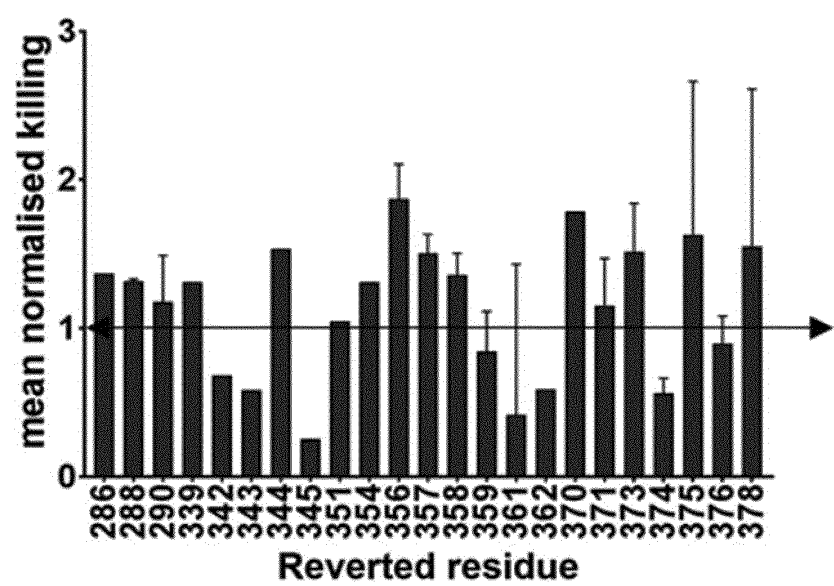


Figure 9A

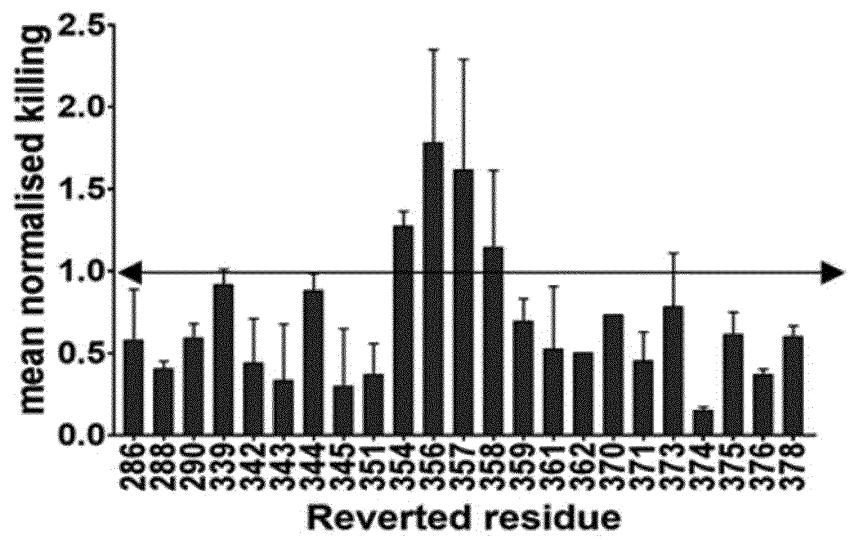


Figure 9B

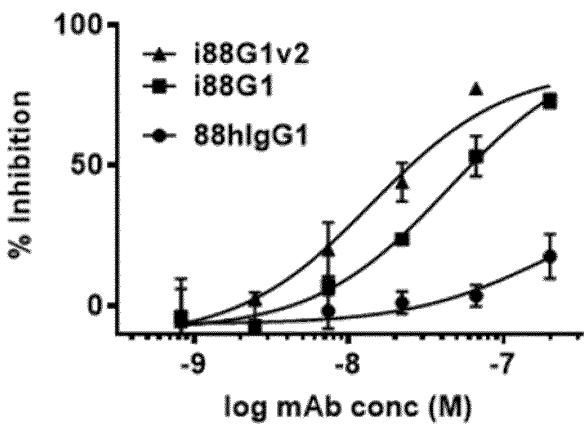


Figure 9C

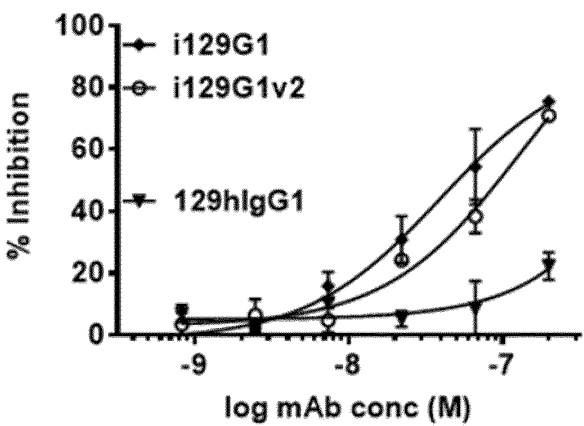


Figure 9D

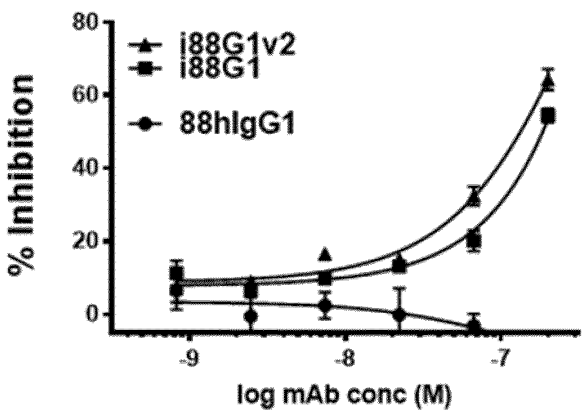


Figure 9E

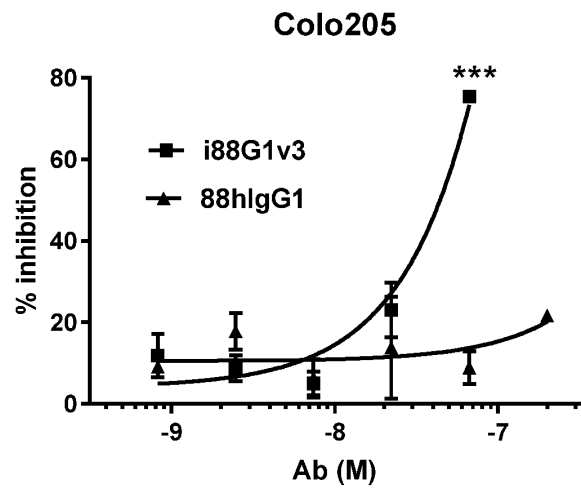


Figure 9F

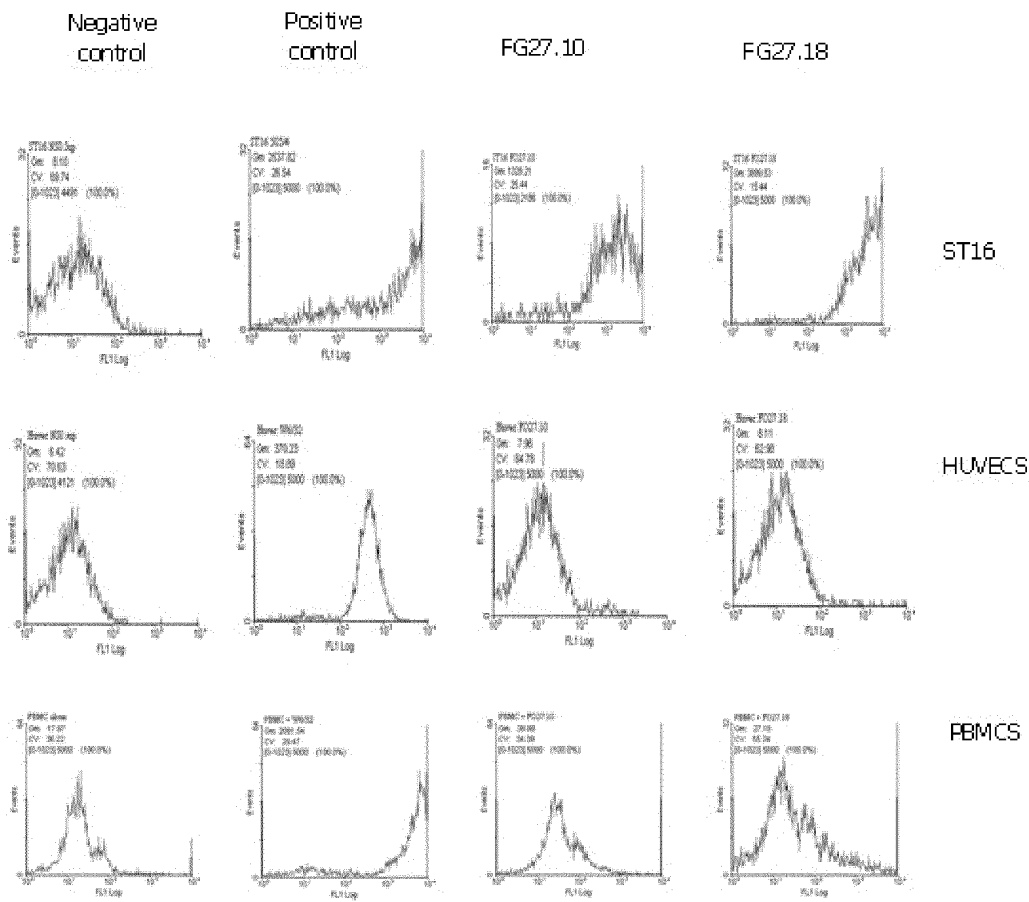


Figure 10

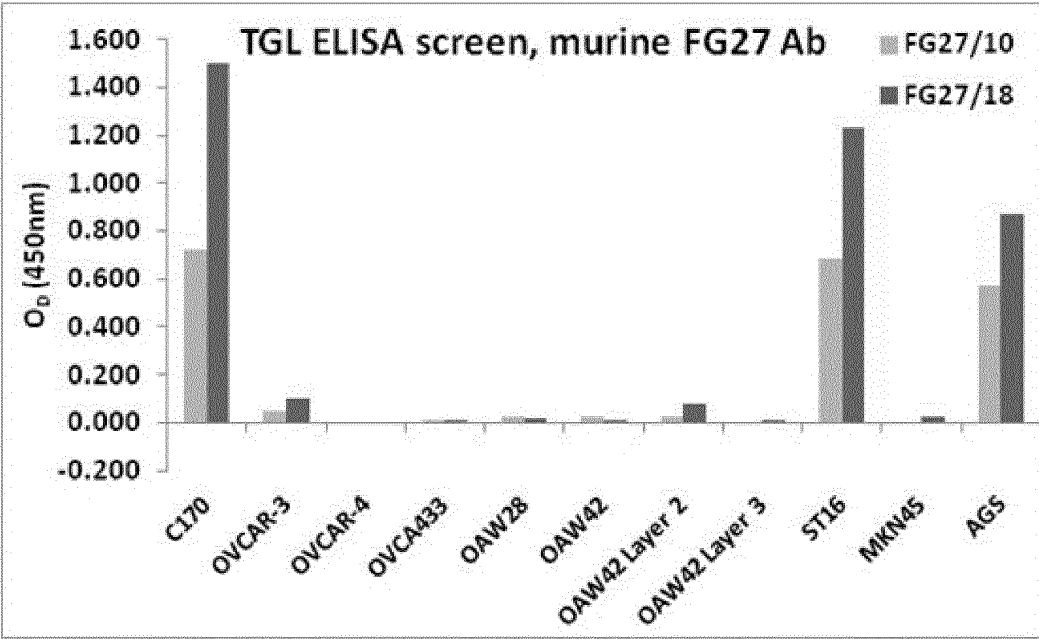


Figure 11

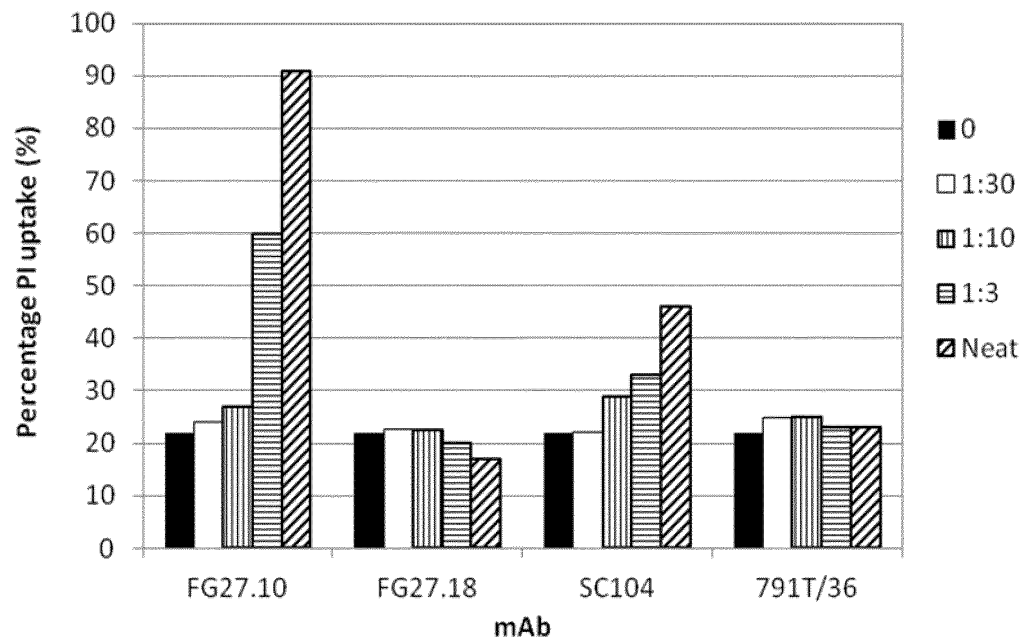


Figure 12A

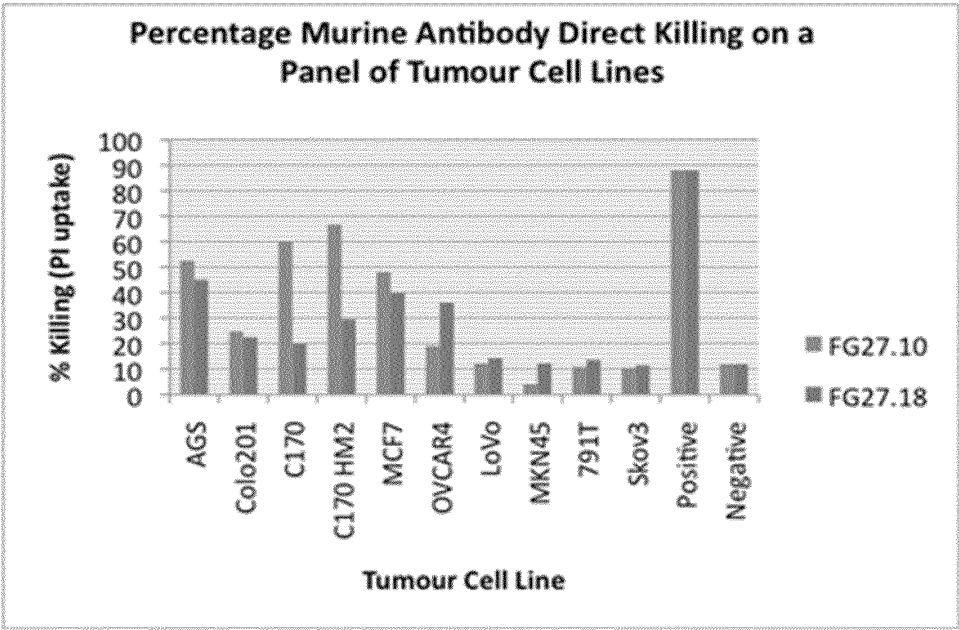


Figure 12B

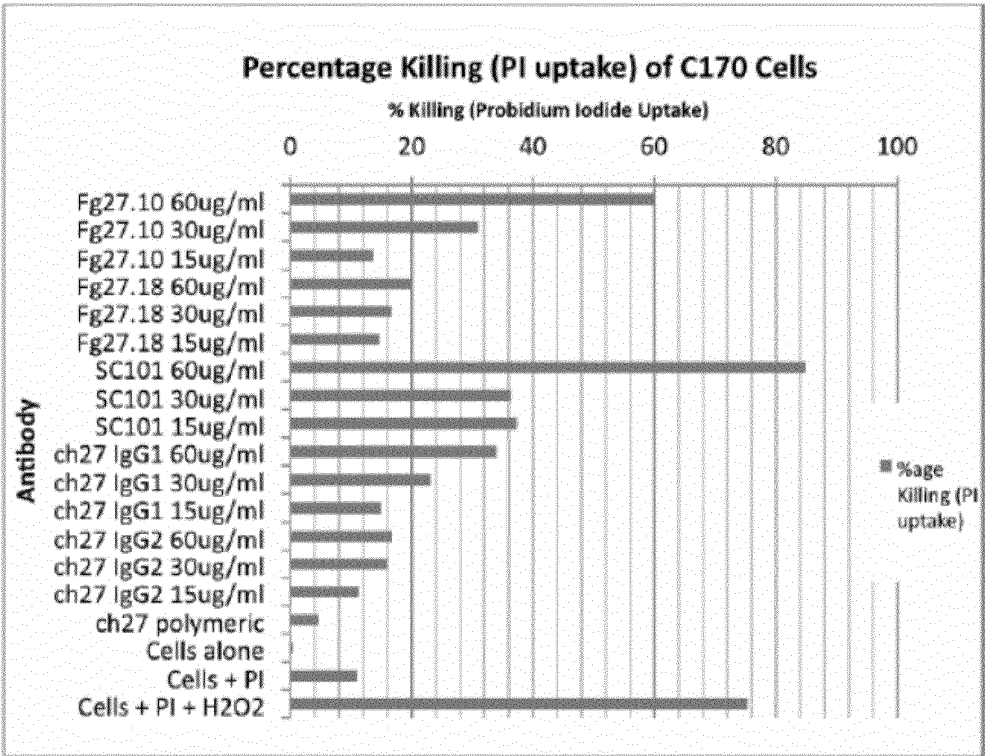
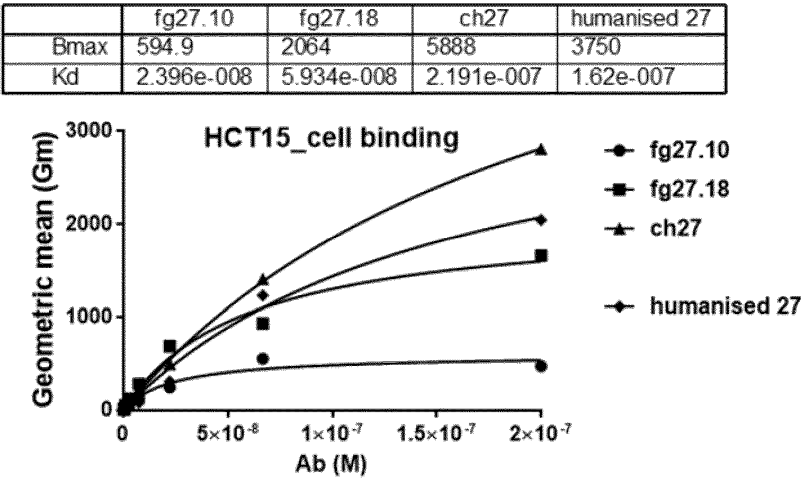


Figure 12C



	fg27.10	fg27.18	ch27	humanised 27
Bmax	1126	2619	~ 60410	3639
Kd	5.262e-008	6.627e-008	~ 7.964e-006	1.145e-006

Figure 13A

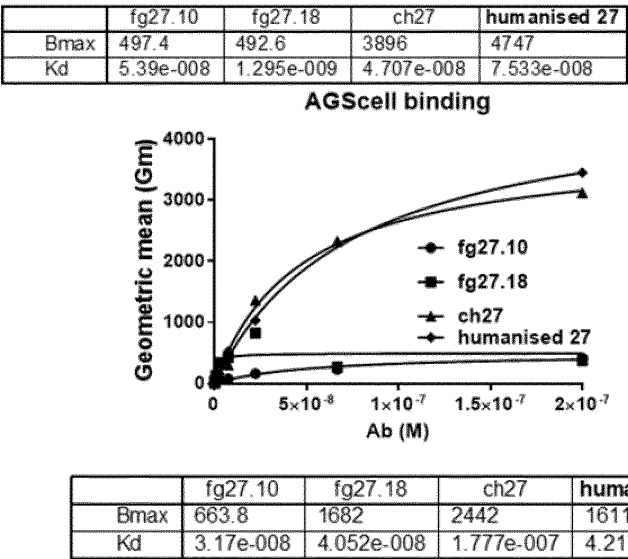


Figure 13B

	fg27.10	fg27.18	ch27	humanised 27
Bmax	1126	2619	~ 60410	3639
Kd	5.262e-008	6.627e-008	~ 7.964e-006	1.145e-006

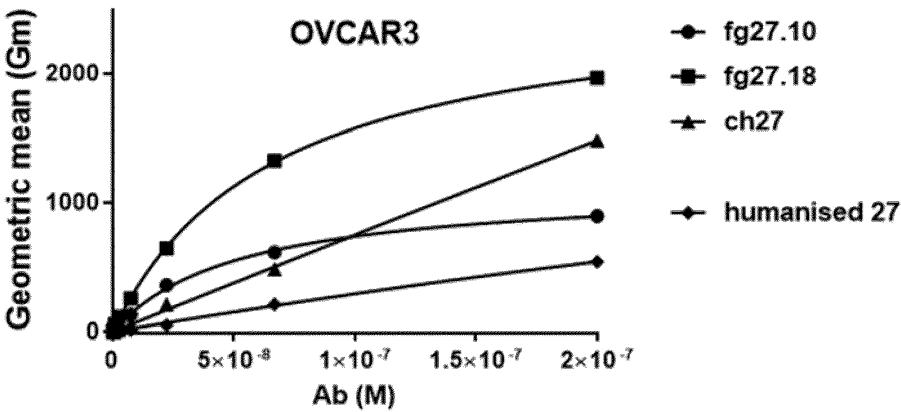


Figure 13C

	fg27.10	fg27.18	ch27	humanised 27
Bmax	663.8	1682	2442	1611
Kd	3.17e-008	4.052e-008	1.777e-007	4.217e-007

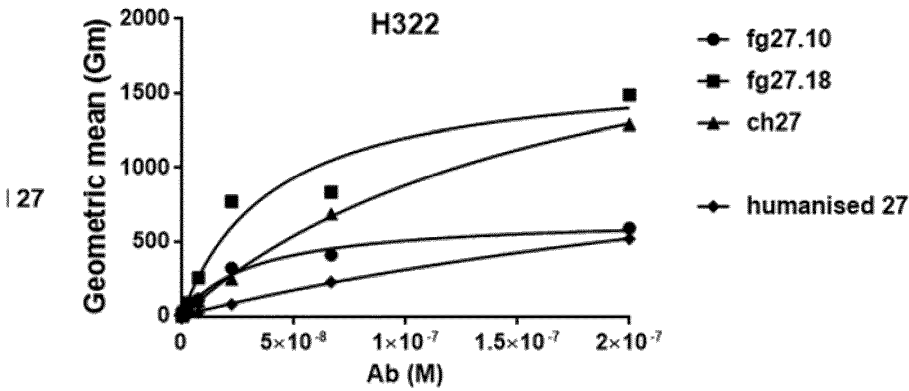


Figure 13D

	fg27.10	fg27.18	ch27	humanised 27
Bmax	1887	3662	17813	6080
Kd	1.568e-008	2.244e-008	1.435e-006	1.014e-007

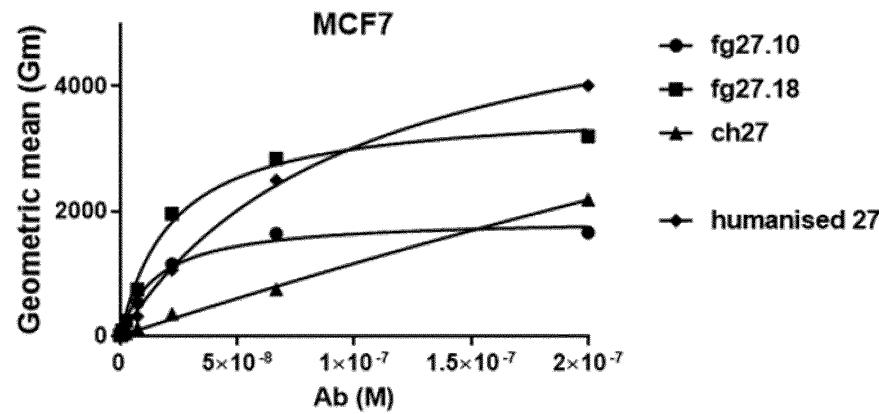


Figure 13E

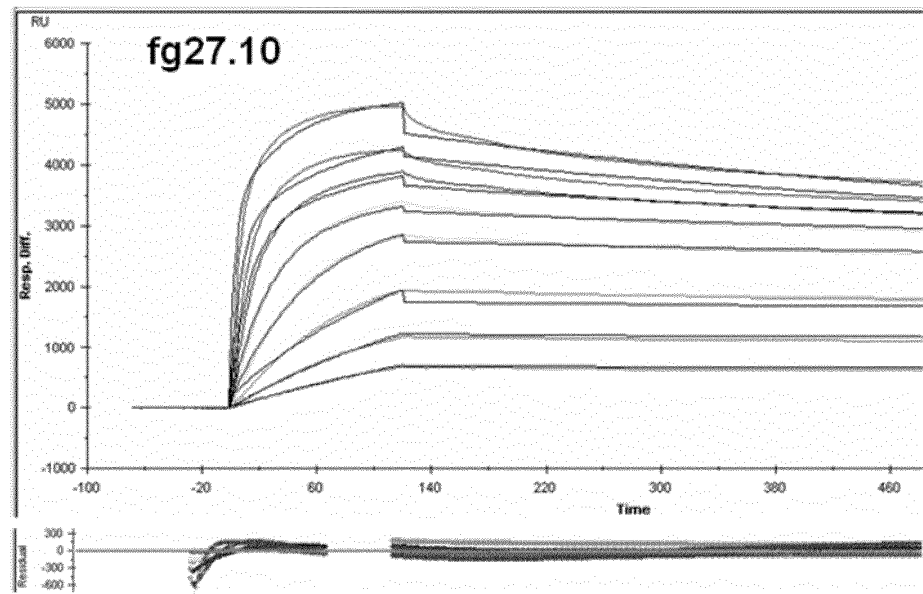


Figure 13F

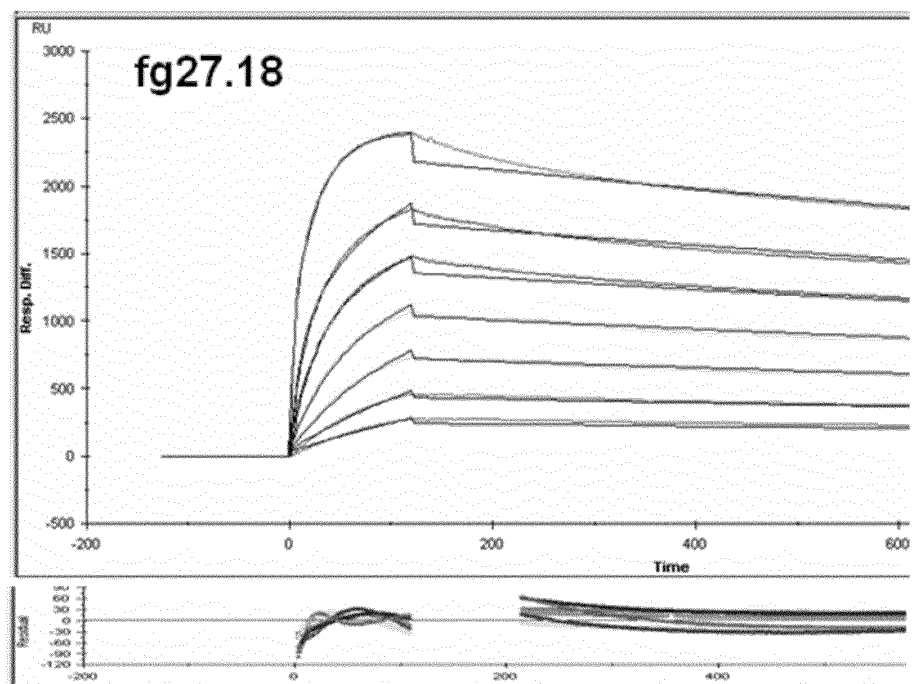


Figure 13G

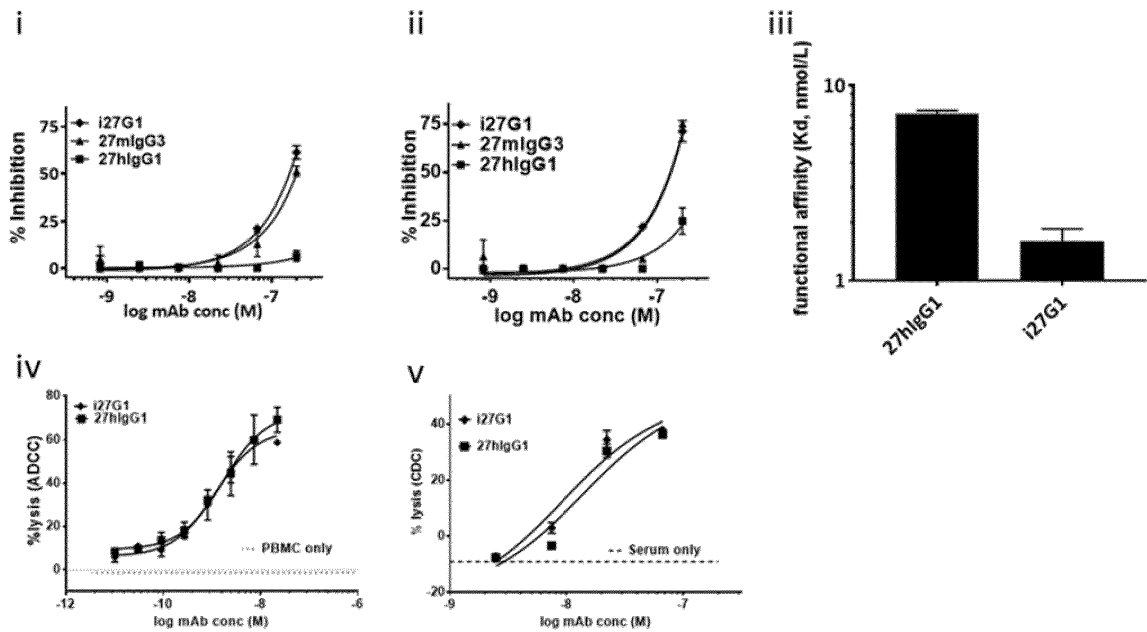


Figure 14

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TPPVLDSKGSFELYSLYKLTVDKSRWOOGNVFSCLVMHEALHNHYTOKSLSLSPGK

Figure 15A

Heavy chain DNA sequence of i88v2 (variable + 'improved' v2 constant region)

Atgtacttgggactgaactgtgtattcatagtttttctttaaattggtgtccagagtgaagtgaactcgaggagctggaggaggcttggtgcaacctggaggatccatgaaactctctgtgctgctctggattcatttttagtgacgctggatgaactgggtccgagctctccagagaaggggcttgagtggttgcgaaattagaagcaaatgattaatcctgcaatatactatgctgagctgtgaaagagaggttcaccatattaagagatgattccaaaagtagtctacctgcaaatgaacagcttaagagctgaagacactggaatttattactgttccaggtctactatgattacgacaagggaccgtcccggtacttcatgtctggggcgagggaccacgggtcacctgtccagcgcttccaccaagggccatcggtcttccccctggcaccctcctccaagagcacctctgggggcacagcgccctgggtgctgctggtaaggactacttccccgaaccgggtgacgggtgctgggaactcaggcgccctgaccagcggtgcacaccttccgggtgctctacagtcctcaggactctactccctcagcagcggtgtgacgggtccctccagcagcttgggcacccagacctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagaaagttgagccaaatcttgtgacaaaactcacacatgcccacgtgccagcacctgaactcctggggggaccgtcagcttctcttcccccaaaaaccaaggacacctcatgatctcccgaccctgaggtcacatgctgtgtgtggagctgagccacgaagaccctgaggtcaagttcaactggtagctggacggcggtggaggtgcatacagcctggacacagccccgtgaagagcagtacaacagctacacagtggtcagtgctctcaccgtcctgcaccaggactggctgaatggcaaggagtagaagtgcaaggtctccaacaaagccctccagccccatcgagaaacatctccaagccaaaggaagagcccgaacacctcaagtatacacataccccatccgtgatgagctgtccaagaagaaggttagctgacctgcctgggtcaaaaacttctattctgaagccatcagtggtggagtggaagagcaatgggcagccggagaacaactacaagaccacgctcccggtctggactccgacggctccttctctctacagcaagctcacctgtggaacaagagcaggtggcagcaggggaacgtcttctcatgtctccgtgatgcatgaggctctgcacaaccactacgcgagaagagcctctccctgtctcgggtaaa

Heavy chain protein sequence of i88v2 (variable + 'improved' v2 constant region)

MYLGLNLCVFIVFLNGVQSEVKLEESGGGLVQPGGSMKLSCAASGFTTSDAWMNWVRQSP
EKGLEWVAEIRSKVINPAIYYAESVKERFTILRDDSKSSVYLOMNSLRAEDTGIIYCSRS
TMITTRDPSRYFDVWAGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPE
PVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVD
KKVEPKSCDKHTHTCPPCPAPELLGPPSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPE
VKFNWYVDGVEVHTFAWTQPREEQYNSTYRVVSVLTVQLHQLDNLNGKEYKCKVSNKALPAPI
EKTISKAKGRARTPOVYTIIPSRDELSKKKVSILTCLVKNFYSEAIISVEWESNGQFENNYK
TTPPVLDSDSGFFLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPGK

Heavy chain DNA sequence of i88v3 (variable + 'improved' v3 constant region)

atgtacttgggactgaactgtgtattcatagtttttctttaaattggtgtccagagtgaagtgaactcgaggagctggaggaggcttggtgcaacctggaggatccatgaaactctctgtgctgctctggattcatttttagtgacgctggatgaactgggtccgagctctccagagaaggggcttgagtggttgcgaaattagaagcaaatgattaatcctgcaatatactatgctgagctgtgaaagagaggttcaccatattaagagatgattccaaaagtagtctacctgcaaatgaacagcttaagagctgaagacactggaatttattactgttccaggtctactatgattacgacaagggaccgtcccggtacttcatgtctggggcgagggaccacgggtcacctgtccagcgcttccaccaagggccatcggtcttccccctggcaccctcctccaagagcacctctgggggcacagcgccctgggtgctgctggtaaggactacttccccgaaccgggtgacgggtgctgtgggaactcaggcgccctgaccagcggtgcacaccttccgggtgctctacagtcctcaggactctactccctcagcagcggtgtgacgggtccctccagcagcttgggcacccagacctacatctgcaacgtgaatcacaagcccagcaacaccaaggtggacaagaaagttgagccaaatcttgtgacaaaactcacacatgcccacgtgccagcacctgaactcctggggggaccgtcagcttctcttcccccaaaaaccaaggacacctcatgatctcccgaccctgaggtcacatgctgtgtgtggagctgagccacgaagaccctgaggtcaagttcaactggtagctggacggcggtggaggtgcataatgccaagacaaagccccgtgaagagcagtacaacagctacacagtggtcagtgctctcaccgtcctgcaccaggactggctgaatggcaaggagtagaagtgcaaggtctccaacaaagccctccagccccatcgagaaacatctccaagccaaaggaagagcccgaacacctcaagtatacacctgccccatcccgatgagctgaccaagaagaaggttagctgacctgcctgggtcaaaagcttctattctagcgcctcgcgtggagtggaagagcaatgggcagccggagaacaactacaagaccacgctcccggtctggactccgacggctccttctctctacagcaagctcacctgtggaacaagagcaggtggcagcaggggaacgtcttctcatgtctccgtgatgcatgaggctctgcacaaccactacgcgagaagagcctctccctgtctcgggtaaa

Figure 15B

Heavy chain protein sequence of i88v3 (variable + 'improved' v3 constant region)

MYLGLNCVFIVFLLNGVQSEVKLEESGGGLVQPGGSMKLSCAASGFTFSDAWMNWVRQSP
EKGLEWVAEIRSKVINPAIYYAESVKERFTILRDDSKSSVYLQMNSLRAEDTGIYYCSRS
TMITTRDPSRYFDVWGAGTTVTVSSASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPE
PVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVD
KKVEPKSCDKTHTCPPCPAPELLGGPSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPE
VKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPI
EKTISKAKGRARTPQVYTLPPSRDELTKKKVSLTCLVKGFYSSAIAVEWESNGQPENNYK
TTPPVLDSDGSFFLYSKLTVDKSRWQQGNVFCFVSMHEALHNHYTQKSLSLSPGK

Figure 15C

129 Light chain DNA sequence (variable region + Kappa constant)

atggaatcacagactcaggtcctcatgtccctgctgttctgggtatctacctgtggggacattgtgatgacacagtcctcatcctccctgactgtga
 cagcaggagagaaggtcactatgagctgcaagtcagtcagagtcgtgttaaagtcaggaaatcaaaagaactacttgacctggtaccagcaga
 aaccagggcagcctcctaaagtgttgatctactgggcattcactaggggaatctggggcctctgatcgcttcacaggcagtggtatctggaacagat
 ttactctcaccatcagcagtgctgaggctgaagacctggcaggtttattactgtcagaatgattatagttctccattcacgttcggctcggggacaa
 agttggaataaaacgtacggtagcgccccatctgtcttcatcttccgcatctgatgagcagttgaaatctggaaactgcctctgttgtgtcct
 gctgaataacttctatcccagagaggccaagtacagtggaaggtggataacgcccccaatcggtgaactcccaggagagtgctacagagca
 ggacagcaaggacagcacctacagcctcagcagcaccctgacgtgagcaaagcagactacgagaaacacaaagtctacgctgcgaagtca
 cccatcagggtcgtgagctcgccgtcacaaagagcttcaacaggggagagtg

129 Light chain protein sequence (variable region + Kappa constant)

MESQIQVLSLLFWVSTCGDIVMTQSPSSLTIVAGEKVTMSCKSSQSLLSGNQKNYLTW
 YQQKPGQPPKVLIIYWASTRESGVDPDRFTGSGSGTDFTLTISVVQAEDELAVYYCQNDYSSP
 FTFGSGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCILNNFYPREAKVQWKVDNALQ
 SGNSQESVTEQDSKSDSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

Heavy chain DNA sequence of i129v1 (variable + 'improved' v1 constant region)

Atgctgttggggctgaagtgggtttcttgggtttttatcaaggtgtgcattgtgagggtgcagcttgttggagctggtggaggattggtgcagcct
 aaagggtcattgaaactctcatgtgcagcctctggattcaccttcaatacctacgccatgaactgggtccgccagggtccaggaaaagggtttgga
 atgggttgcctcgataagaagtaaaagtaataattatgcaacatattatgccgattcagtgaaagacaggttcaccatattccagagatgattcac
 aaagcatgctctatctgcaaatgaacaactgaaaaaggaggacacagccatgtattactgtgtagggtagcgtagtgggggaaactactggg
 gtcaaggaaacctcagtcacgtctccagcgcctccaccaagggccatcggtcttccccctggcaccctcctcaagagcacctctgggggcaca
 gcggccctgggtcgctgtgtaaggactactccccgaaccgggtgacgggtgtcgtggaaactcaggcgcctgaccagcggtgcacacctccc
 ggctgtcctacagtcctcaggactctactcctcagcagcgtgtgacgggtgcctccagcagcttgggcacccagacctacatctgcaactga
 atcacaagcccagcaacaccaagggtggacaagaaagttagcccaaatctgtgacaaaaactacacatgccaccgtgcccagcacctgaac
 tcttggggggaccgtcagtccttcttcccccaaaacccaaggacacctcatgatctccggaccctgagggtcacatgcgtgtggtggtgac
 gtgagccacgaagacctgagggtcaagttcaactgtgtacgtggacggcgtggagggtgcatacagcctggacacagccccgtgaagagcagta
 aacagtaacctaccagtggtcagtgctcctcaccgtcctgaccaggactggctgaatggcaaggagtaacagtgcaaggtctccaacaaagccc
 tcccagccccatcgagaaaaacatctccaaacccaaggaagagcccagacacctcaagtataccataccccacacctgtgaacaaatgt
 ccaagaagaagggttagtctgacctgctgtgaccaaacttcttctgaagccatcagtggtgagtgaggagagcaatgggcagcgggagaacaa
 ctacaagaccacgcctccgtgctggactccgacggctccttctcctcagcaagctcaccgtggacaagagcaggtggcagcagggggaac
 gtcttctcatgctcctgatgcaggtgctctgcacaaccactacacgcagaagagcctctcctgtctccgggtaaa

Heavy chain Protein sequence of i129v1 (variable + 'improved' v1 constant region)

MLLGLKWVFFVVFYQGVHCEVQLVESGGGLVQPKGSLKLSCAASGFTFNTYAMNWVRQAP
 GKGLEWVARIRSKSNVATYYADSVKDRFTISRDDSQSMYLYQMNNLKEDTAMYYCVGY
 GSGGNYWGQGTISVTVSS
 ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALISGVHFTFPAVLQSS
 GLYSLSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKHTHTCPPCPAPELLGG
 PSVFLFPPKPKDTLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHTAHTQPREQYN
 STYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKPKGRAQTPQVYTIPTPPREQ
 MSKKKVSLLTCLVTNFFSEAI SVEWESNGQPENNYKTPPVLDSDGSFFLYSKLTVDKSRW
 QQGNVFSQSVMEALHNHYTQKSLSLSPGK

Figure 16A

Heavy chain DNA sequence of i129v2 (variable + 'improved' v2 constant region)

Atgctgttggggtgaagtggtttcttctgtgtttttatcaagggtgtcattgtgaggtgcagcttgttgagctgtgtggaggattggtgcagcct
aaagggtcattgaaactctcatgtgcagcctctggattcaccttcaatacctacgccatgaactgggtccgccaggctccaggaaagggttggga
atgggtgtctgcataagaagtaaaagtaataattatgcaacatattatgccgattcagtgaaagacaggttcaccatatccagagatgattcac
aaagcatgctctatctgcaaatgaacaacttgaaaaaggaggacacagccatgtattactgtgtagggtagcggtagtgggggaaactactggg
gtcaaggaaacctcagtcaccgtctccagcgttccaccaagggccatcggtcttccccctggcaccctctccaagagcacctctggggcaca
gcggccctgggctgcctgtcaaggactacttccccgaaccgggtgacggtgtcgtggaaactcaggcgcctgaccagcggcgtgcacaccttccc
ggctgtctacagtcctcaggacttacttccctcagcagcgtgtgacggtgccctccagcagcttgggcacccagacctacatctgcaacgtga
atcacaagcccagcaaccaagggtggacaagaagttagcccaaatctgtgacaaaactcacacatgccaccgtgcccagcacctgaac
tcttggggggacggtcagcttcttcttcccccaaaacccaaggacacctcatgatctccggacccctgagggtcacatgctgtgtgtggac
gtgagccacgaagacctgagggtcaagttcaactggtagtgacggcggtggagggtgcatacagcctggacacagccccgtgaagagcagta
aacagtacctaccagtggtcagtgctctcaccgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaagggtctccaacaaagccc
tccagccccatcgagaaaaccatctcacaagccaaaggaagagcccgaaacacctcaagtataccatacccccatcccgtgatgagctgtc
caagaagaaggttagtctgacctgctgtgcaaaaacttctattctgaagccatcagtgaggagtgaggagcaatgggcagccggagaaaca
ctacaagaccagcctcccgtctggactccgacggctcttcttctctacagcaagctcaccgtggacaagagcaggtggcagcaggggaac
gtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaagacctctccctgtctccgggtaaa

Heavy chain Protein sequence of i129v2 (variable + 'improved' v2 constant region)

MLLGLKWFVVFYQGVHCEVQLVESGGGLVQPKGSLKLSCAASGFTFNTYAMNWVRQAP
GKGLEWVARIRSKSNMYATYYADSVKDRFTISRDDSQSMLYLQMNNLKKEDTAMYYCVGY
GSGGNYWGQGTSTVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTIKVDKKVEPKSCDKHTCPPCPAPPELLGG
PSVFLFPPKPKDITLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHTIATWQPREEQYN
STYRVVSVLTVTLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGRARTPQVYTIIPSRDE
LSKKKVSILTCLVKNFYSEAISEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRW
QQGNVFCFSVMHEALHNHYTQKSLSLSPGK

Heavy chain DNA sequence of i129v3 (variable + 'improved' v3 constant region)

Atgctgttggggtgaagtggtttcttctgtgtttttatcaagggtgtcattgtgaggtgcagcttgttgagctgtgtggaggattggtgcagcct
aaagggtcattgaaactctcatgtgcagcctctggattcaccttcaatacctacgccatgaactgggtccgccaggctccaggaaagggttggga
atgggtgtctgcataagaagtaaaagtaataattatgcaacatattatgccgattcagtgaaagacaggttcaccatatccagagatgattcac
aaagcatgctctatctgcaaatgaacaacttgaaaaaggaggacacagccatgtattactgtgtagggtagcggtagtgggggaaactactggg
gtcaaggaaacctcagtcaccgtctccagcgttccaccaagggccatcggtcttccccctggcaccctctccaagagcacctctggggcaca
gcggccctgggctgcctgtcaaggactacttccccgaaccgggtgacggtgtcgtggaaactcaggcgcctgaccagcggcgtgcacaccttccc
ggctgtctacagtcctcaggacttacttccctcagcagcgtgtgacggtgccctccagcagcttgggcacccagacctacatctgcaacgtga
atcacaagcccagcaaccaagggtggacaagaagttagcccaaatctgtgacaaaactcacacatgccaccgtgcccagcacctgaac
tcttggggggacggtcagcttcttcttcccccaaaacccaaggacacctcatgatctccggacccctgagggtcacatgctgtgtgtgtggac
gtgagccacgaagacctgagggtcaagttcaactggtagtgacggcggtggagggtgcataatgcaagacaaagccccgtgaagagcagta
caacagtacctaccagtggtcagtgctctcaccgtcctgcaccaggactggctgaatggcaaggagtacaagtgcaaggtctccaacaaagcc
ctcccagccccatcgagaaaaccatctcacaagccaaaggaagagcccgaaacacctcaagtataccctgcccccatcccgtgatgagctg
accaagaagaaggttagtctgacctgctgtgcaaaagcttctattctagcccatcgccgtggagtggagagcaatgggcagccggagaaac
aactacaagaccagcctcccgtgctggactccgacggctcttcttctctacagcaagctcaccgtggacaagagcaggtggcagcagggga
acgtcttctcatgctccgtgatgcatgaggctctgcacaaccactacacgcagaagacctctccctgtctccgggtaaa

Figure 16B

Heavy chain Protein sequence of i129v3 (variable + 'improved' v3 constant region)

MLLGLKWWFFVVFYQGVHCEVQLVESGGGLVQPKGSLKLSCAASGFTFNTYAMNWVRQAP
GKGLEWVARIRSKSNNYATYYADSVKDRFTISRDDSQSMYLYQMNNLKKEDTAMVYCVGY
GSGGNYWGQGTSTVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHCTPPCPAPELLGG
PSVFLFPPKPKDILMISRTPETCVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYN
STYRVVSVLTVTLHSDWLNQKEYKCKVSNKALPAPIEKTISKAKGRARTPQVYTLPPSRDE
LTKKKVSLTCLVKGFISSAIAVEWESNGQPENNYKTTTPVLDSDGSFFLYSKLTVDKSRW
QQGNVFSCSVMHEALHNHYTQKSLSLSPGK

Figure 16C

27 Light chain DNA sequence (variable region + Kappa constant)

atgaagttgctgttaggctgttggtgctgatgttctggattcctgctccatcagtgatgtttgatgacccaaactccactctccctgctgtcagt
 cttggagatcaagcctccatctcttgagatctagtcagatcattgtacataactatgaaacacctatttagaatggtagctgcagaaaccaggc
 cagtcctccaaacctctgatctacaaagttccaaccgattttctgggtcccagacaggttcagtggtgagtgatcaggacagattcacactc
 aagatcagcagagtgaggctgaggatctgggagtttattactgcttcaaggttcacatgttccattcacgttcggctcggggacaaagtggaa
 aataaaacgtacggttagcgcccatctgtcttcatctcccgccatctgatgacagtggaatctggaactgcctctgttgtgtcctgctgaat
 aacttctatcccagagaggccaaagtacagtggaaggtggataacgcctccaatcggttaactcccaggagagtgctcacagagcaggacagc
 aaggacagcactacagcctcagcagcaccctgacgctgagcaagcagactacgagaaacacaaagtctacgctgcgaagtcccatca
 gggcctgagctcgccgtcacaagagcttcaacaggggagagtg

27 Light chain protein sequence (variable region + Kappa constant)

MKLPVRLVLMFWIPASISDVLMTQTPLSLFVSLGDAQASISCRSSQIIVHTNGNTYLEWYL
 QKPGQSPNLLIYKVSNRFSGVDPDRFSGSGSGTDFTLKISRVEAEDLGVYYCFQGSHPFTF
 GSGTKLEIKRTVAAPSVFIFPPSDEQLKSGTASVVCCLNNFYPREAKVQWKVDNALQSGNS
 QESVTEQDSKDSSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC

Heavy chain DNA sequence of i27v1 (variable + 'improved' v1 constant region)

atgaacttctggctcagcttgatttctgtccttgttttaaaaggtgtccagtggaagtgaagctggtgagtgctggggaggcttagtgagc
 ctggagggtccctgaaactctctgtgcaacctctggattcactttcagtcactattacatgtattgggttcgccagactccagagaagaggctgg
 agtgggtgcatacattagtaatatgagtgataaacctattatccagacactataaggggcccattcaccatctccagagacaatgccaggaa
 caccctgtacctgcaaatgagccgtctgaagctgagggacacagccatgtattactgtgcaagagggaagtacgacggggcctggtttgcttact
 ggggccaaggagctctggtcactgtctctagcgcttccaccaagggccctcggtcttccccctggcaccctcctccaagagcacctctgggggc
 acagcgccctgggctgctggtcaaggactacttccccgaaccggtgacgggtgctgtggaactcaggcgccctgaccagcggtgcacacct
 tcccggtgctctacagtcctcaggacttactccctcagcagcggtgacgggtgacctccagcagcttgggcacccagacctacatctgcaacg
 tgaatcacaagccagcaacaccaaggtggacaagaaagttgagcccaaatctgtgacaaaaactcacatgcccaccgtgccagcacctg
 aactctggggggaccgtcagcttctcttcccccaaaacccaaggacacctcatgatctccggacccctgaggtcacatgctgtggtggtg
 gacgtgagccacgaagacctgaggtcaagttcaactgtgtgacgtggacggcggtgaggtgcatacagcctggacacagccccgtgaagagca
 gtacaacagtacctaccgagtggtcagtgctcctcaccgtcctgaccaggactggctgaatggcaaggagtacaagtgaaggtctccaacaaa
 gcctccagcccccatcgagaaaaccatctccaaaccaaaggaagagccagacacctcaagtatacaccataccccacactcgtgaacaa
 atgtccaagaagaaggttagtctgacctgcctggtcagcaacttctctgaagccatcagtggtgagtgaggagagcaatgggcagccggaga
 acaactacaagaccagcctccgtgctggactccgacggctccttctctctacagcaagctcaccgtggacaagagcaggtggcagcaggga
 gaacgtcttctcatgctcgtgatgcatgaggtctgtcacaaccactacacgcagaagagcctctccctgtctccgggtaaa

Heavy chain Protein sequence of i27v1 (variable + 'improved' v1 constant region)

MNFWLSLIFLVVLKGVQCEVKLVESGGGLVQPGGSLKLSCATSGFTFSHYMYWVRQTP
 EKRLWVAYISNDGDNITYYPDTIRGRFTISRDNARNTLYLQMSRLKSEDTAMYCYCARGKY
 DGAWFAYWCGQTLTVTVSS
 ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
 GLYSLSSVTVTPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKHTCTPPCPAPELLGG
 PSVFLFPPKPKDITLMISRTPEVTCVVDVSHEDPEVKFNWYVDGVEVHTAQTQPREEQYN
 STYRVSVLTITVLHQLDNLNGKEYKCKVSNKALPAPIEKTISKPKGRAQTPQVYTIPTPREQ
 MSKKKVSITCLVTNFFSEALISVEWESNGQPENNYKTPPVLDSDGSFFLYSKLTVDKSRW
 QQGNVFSQSVMEALHNHYTQKSLSLSLSPGK

Figure 17

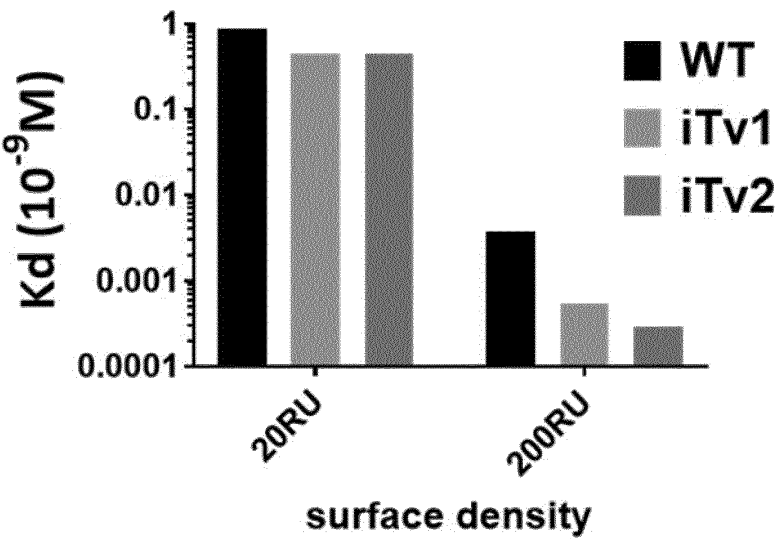


Figure 18A

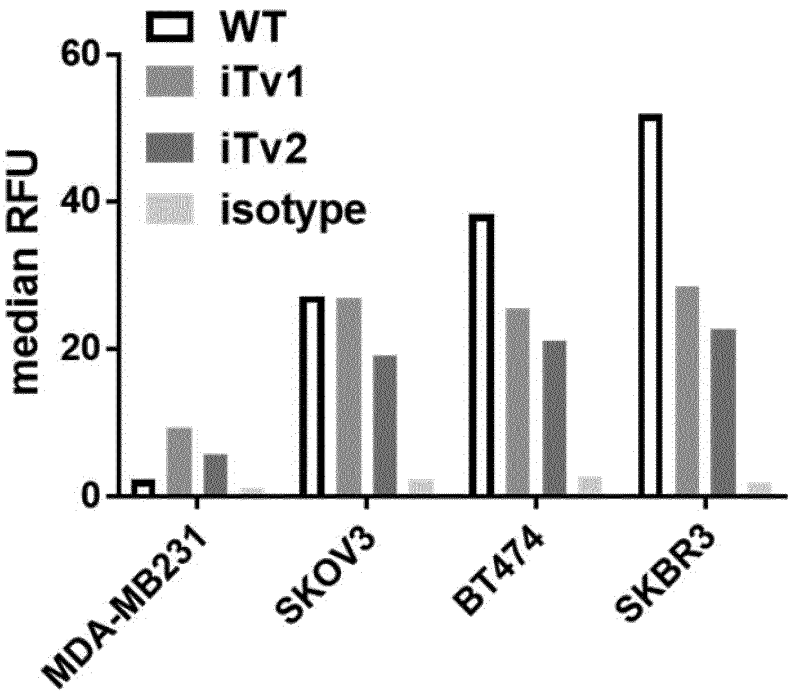


Figure 18B

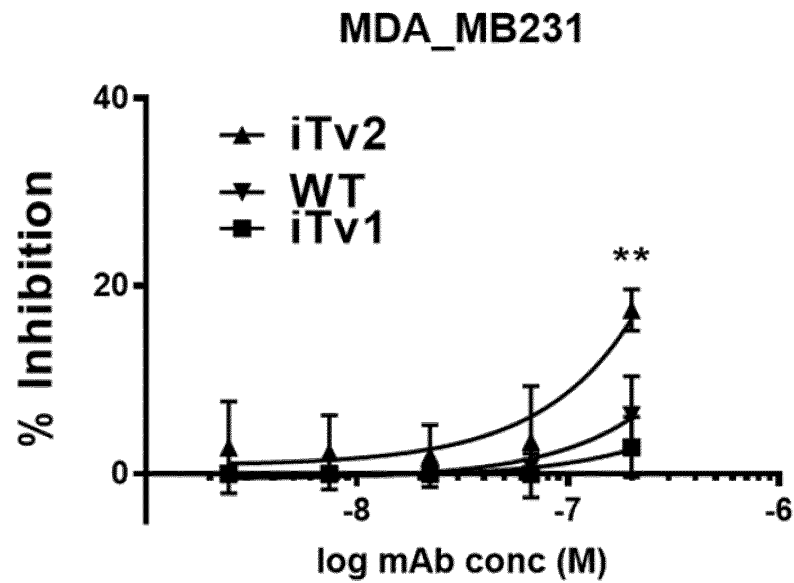


Figure 18C

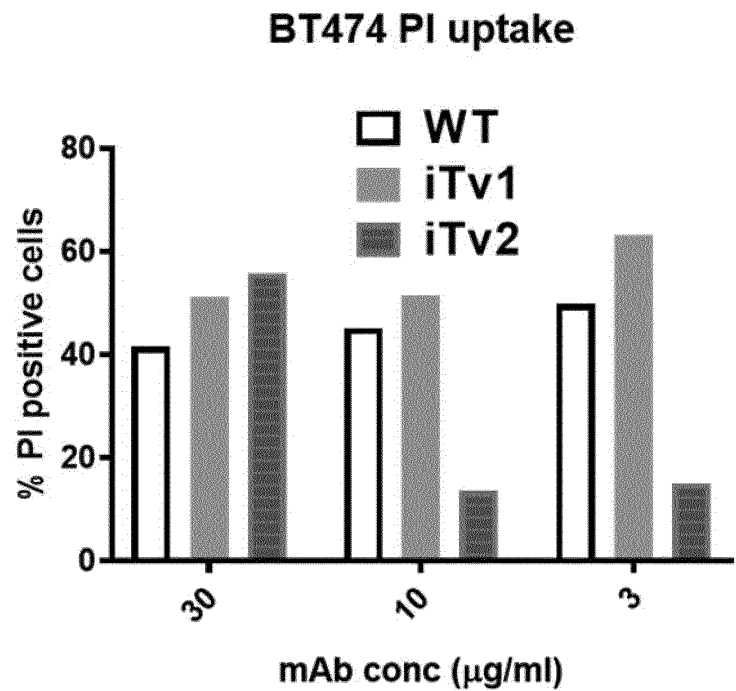


Figure 18D

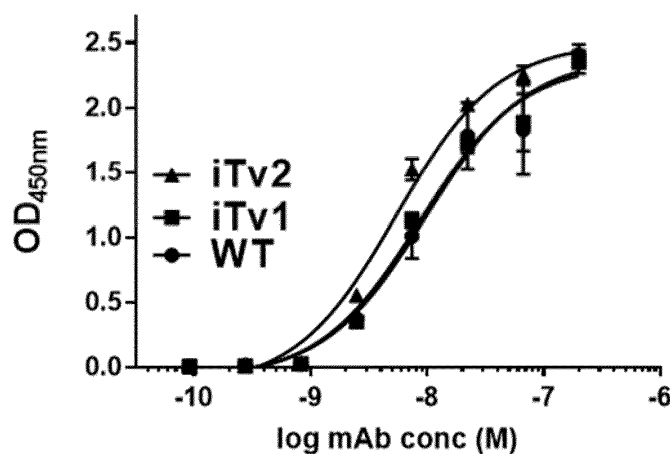


Figure 18E

Heavy chain protein sequence of 'i'trastuzumab v1 and v2 (variable and 'improved' v1 and v2 constant region)

Light chain protein sequence of iTrastuzumabv1 and iTrastuzumabv2

```
DIQMTQSPSSLSASVGDRVTITCRASQDVNTAVAWYQQKPGKAPKLLIYSASFLYSGVPS
RFGSGRSGTDFTLTISLQPEDFATYYCQQHYTTPPTFGQGTKVEIKRTVAAPSVFIFPP
SDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVTEQDSKDSTYLSSTLT
LSKADYEKHKVYACEVTHQGLSSPVTKSFNRGEC
```

Heavy chain protein sequence of iTrastuzumabv1

```
EVQLVESGGGLVQPGGSLRLSCAASGFNIKDTYIHWVRQAPGKGLEWVARIYPTNGYTRY
ADSVKGRFTISADTSKNTAYLQMNSLRAEDTAVYYCSRWGGDGFYAMDYWGQGTLLTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGG
PSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHTAWTQPREEQYN
STYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKPKGRAQTPQVYTIPPREQ
MSKKKVSLTCLVTNFFSEAISVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRW
QQGNVFSCSVMHEALHNHYTQKSLSLSPGK
```

Heavy chain protein sequence of iTrastuzumabv2

```
EVQLVESGGGLVQPGGSLRLSCAASGFNIKDTYIHWVRQAPGKGLEWVARIYPTNGYTRY
ADSVKGRFTISADTSKNTAYLQMNSLRAEDTAVYYCSRWGGDGFYAMDYWGQGTLLTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSS
GLYSLSSVTVPSSSLGTQTYICNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGG
PSVFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVHTAWTQPREEQYN
STYRVVSVLTVLHQDWLNGKEYKCKVSNKALPAPIEKTISKAKGRARTPQVYTIPPSRDE
LSKKKVSLTCLVKNFYSEAISVEWESNGQPENNYKTTPPVLDSDGSFFLYSKLTVDKSRW
QQGNVFSCSVMHEALHNHYTQKSLSLSPGK
```

Figure 19

