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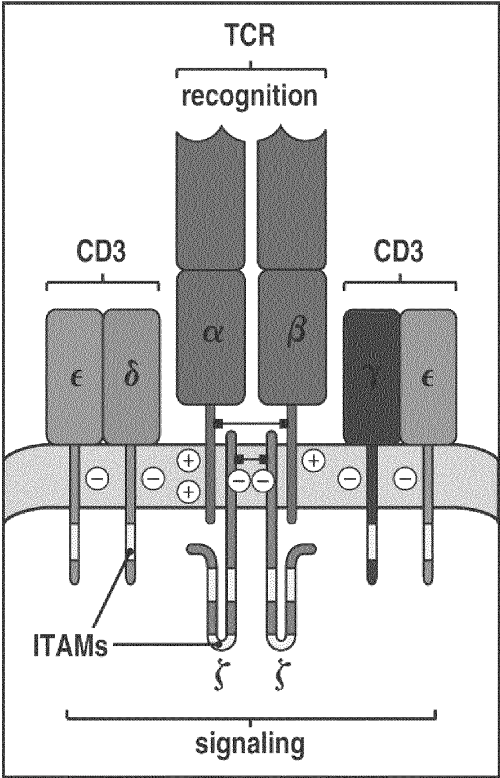


Figure 6-9 Immunobiology, 6/e. (© Garland Science 2005)

Figure 2A

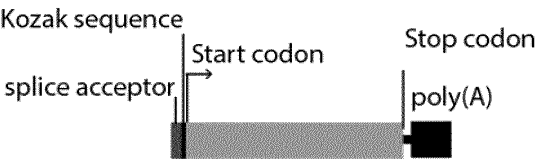


Figure 2B

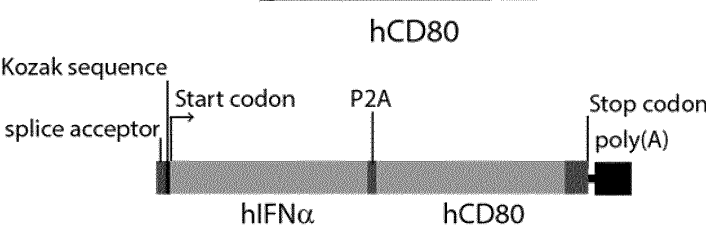


Figure 2C

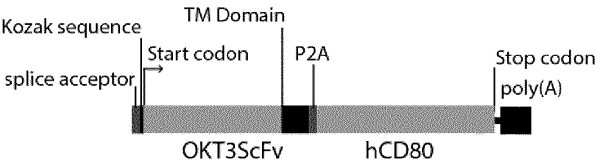


Figure 2D

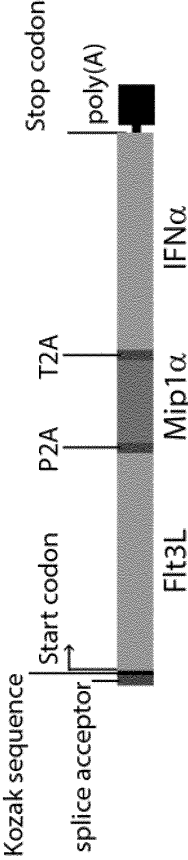


Figure 2E

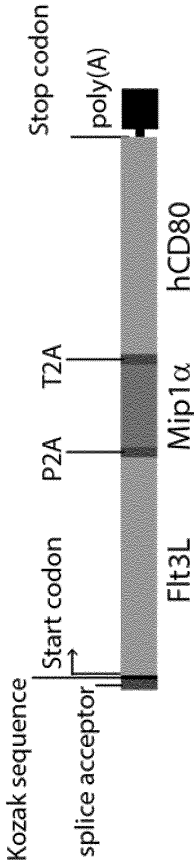


Figure 2F

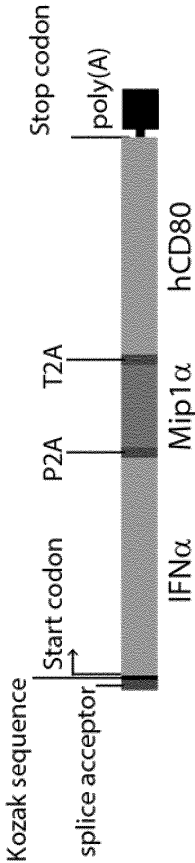


Figure 2G ORF cassette for scFv antibody



Figure 3

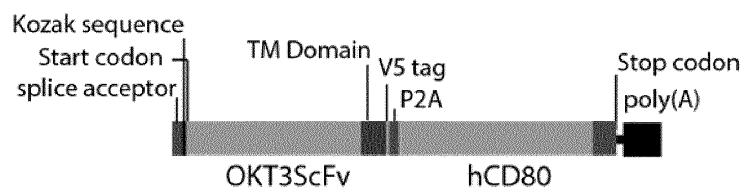
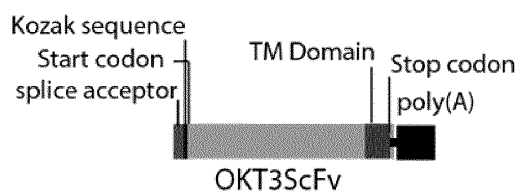
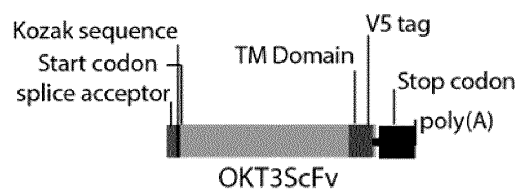
A**B****C**

Figure 4A

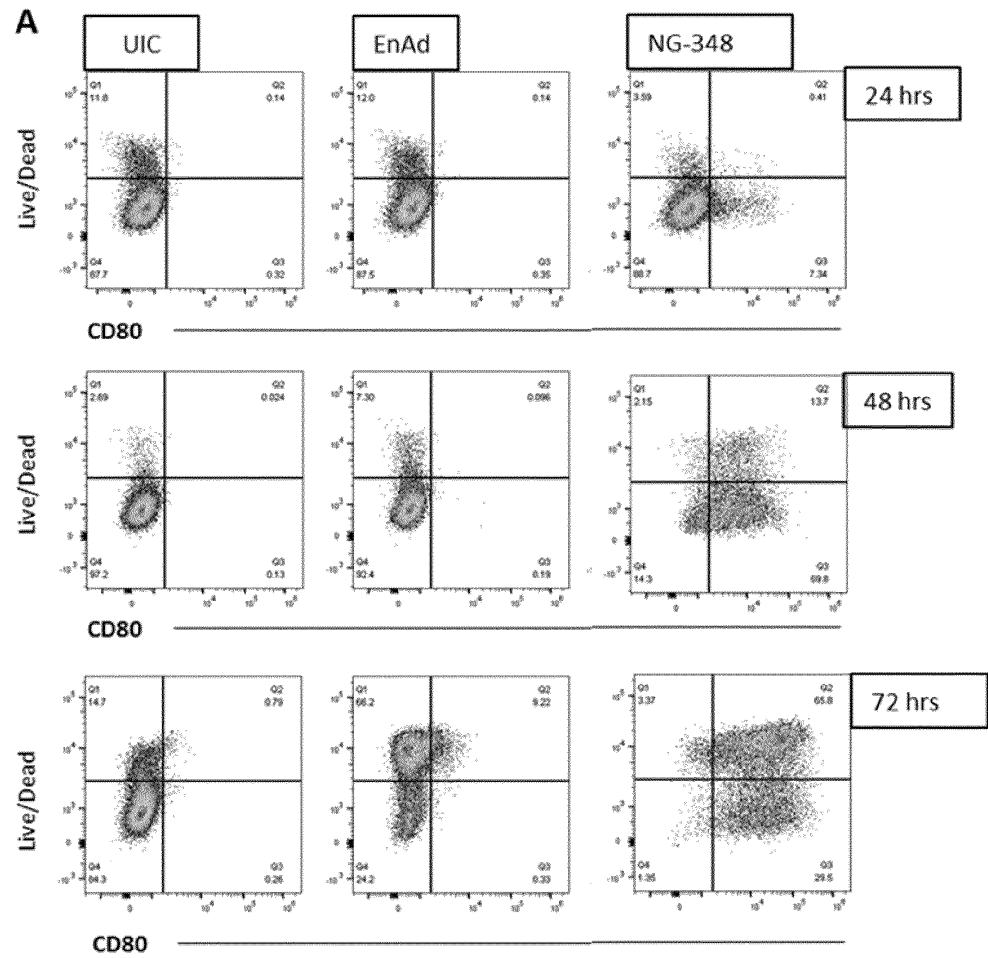


Figure 4B

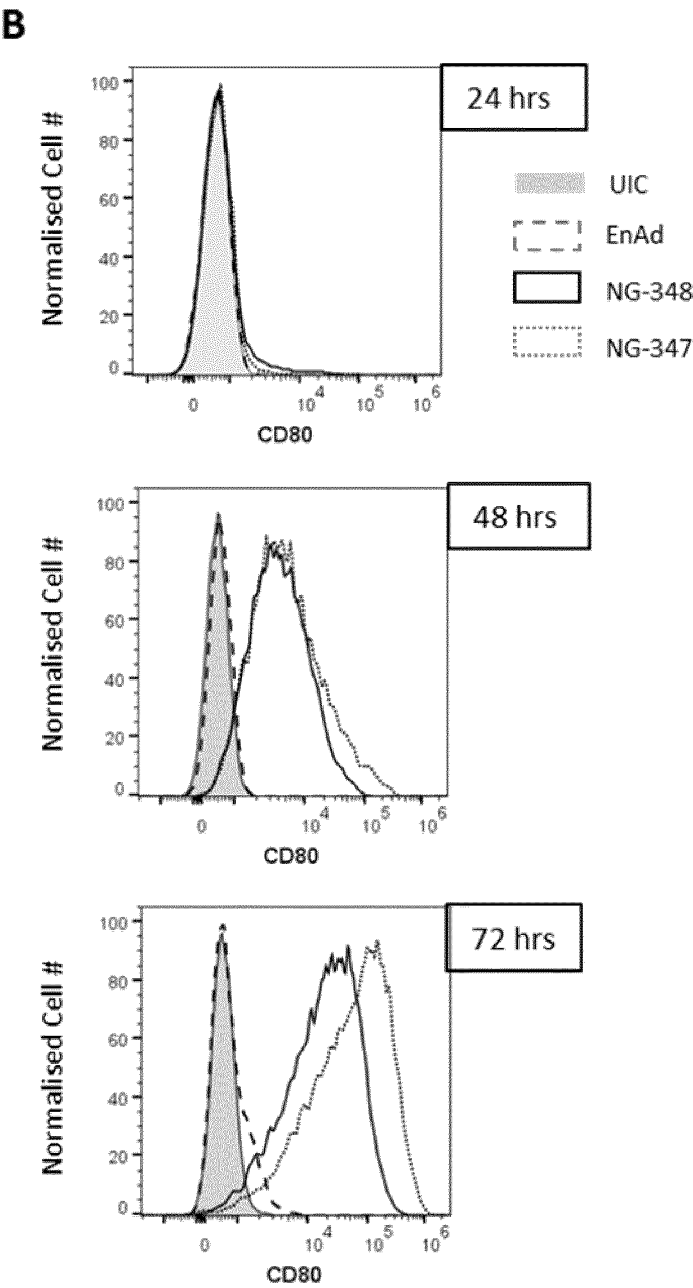


Figure 5A

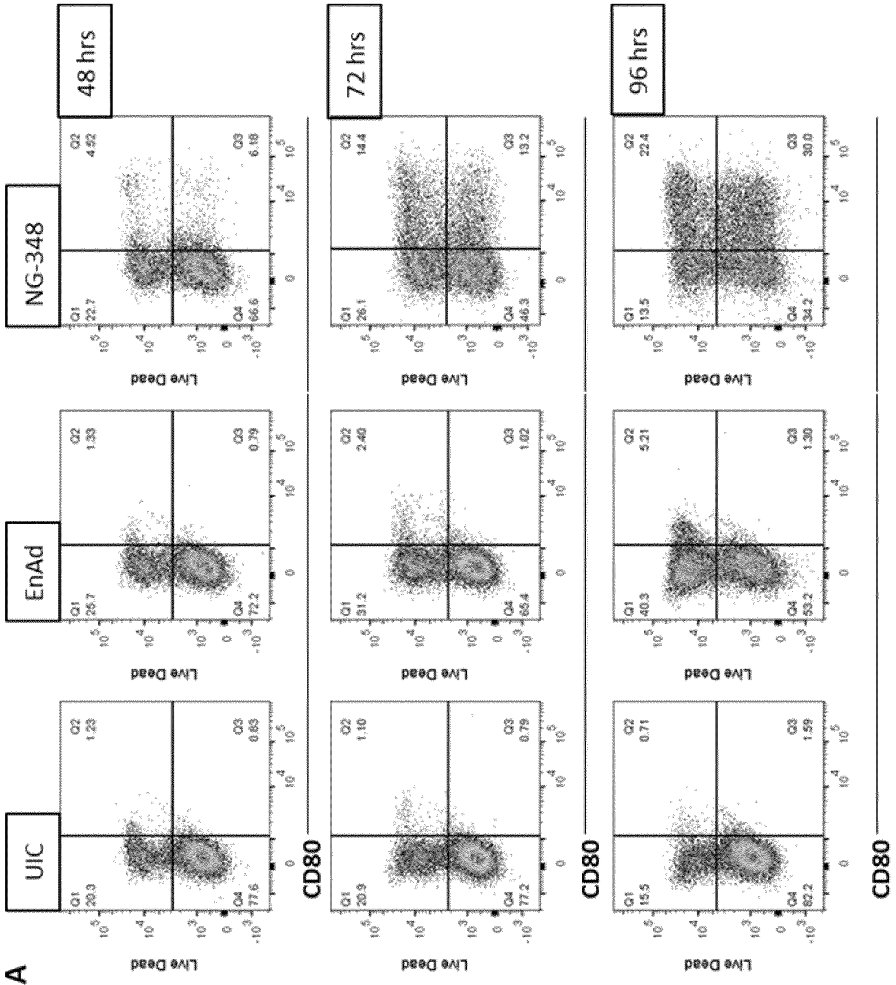


Figure 5B

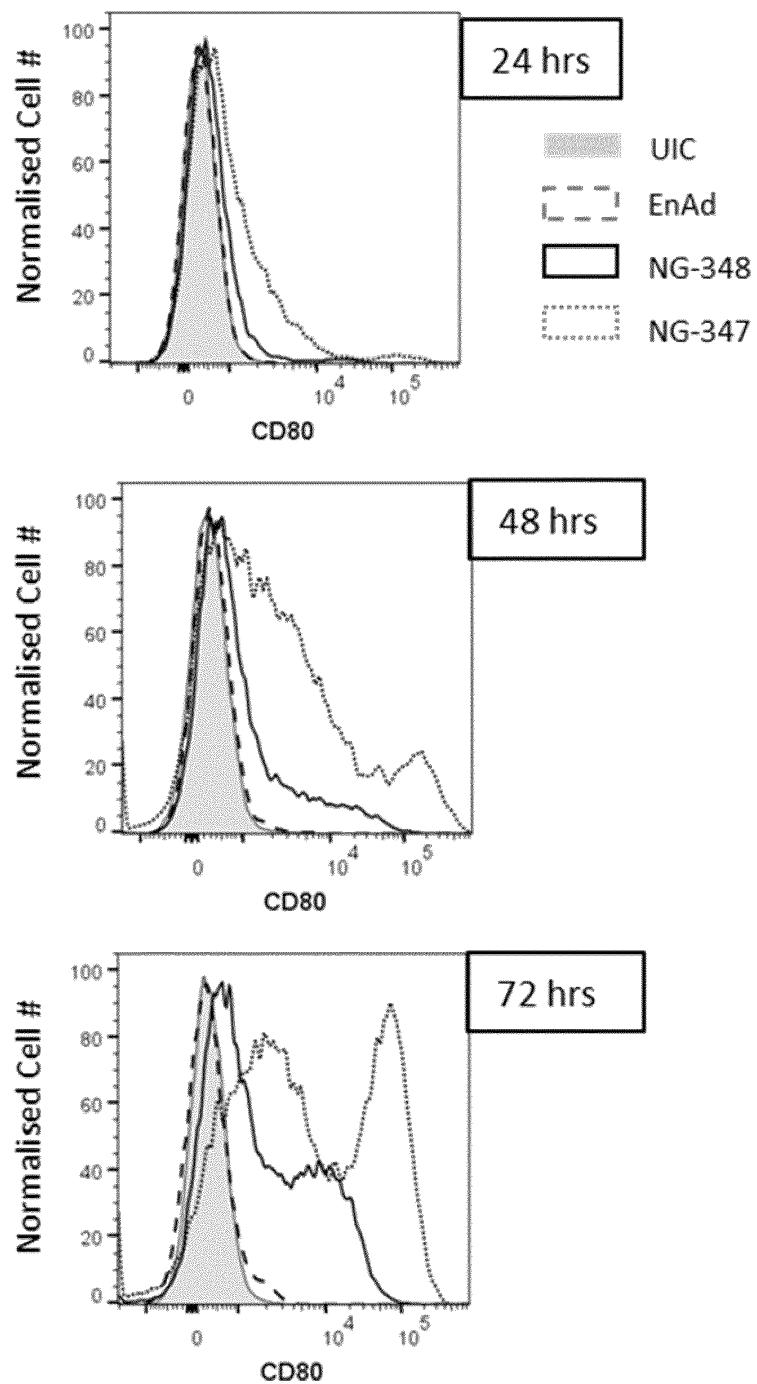


Figure 6

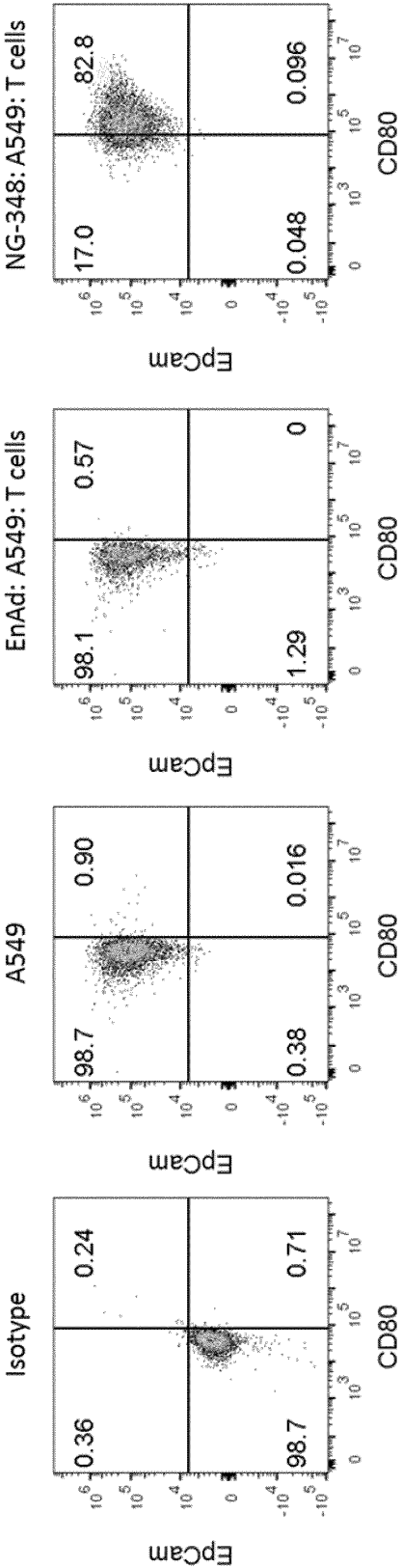
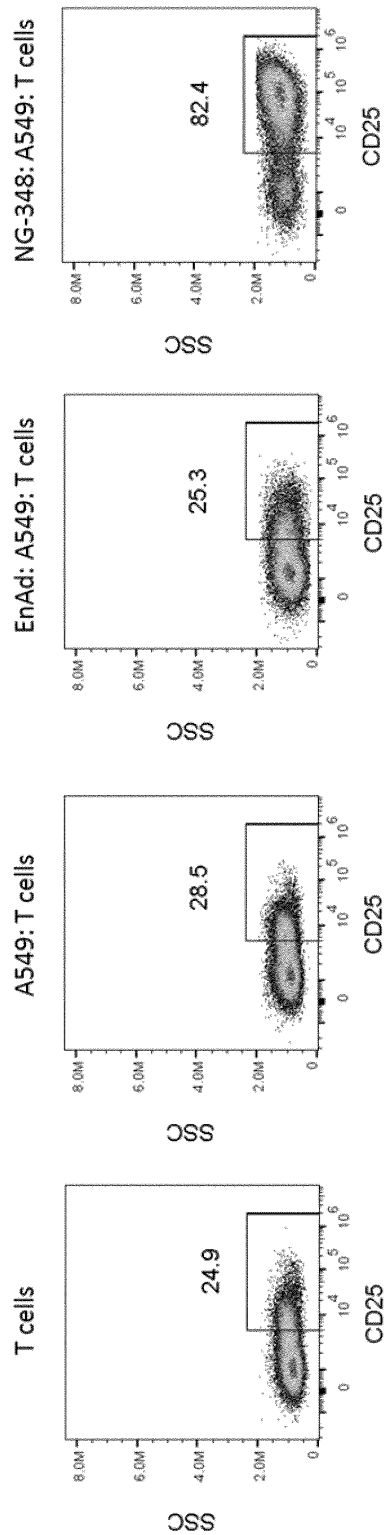
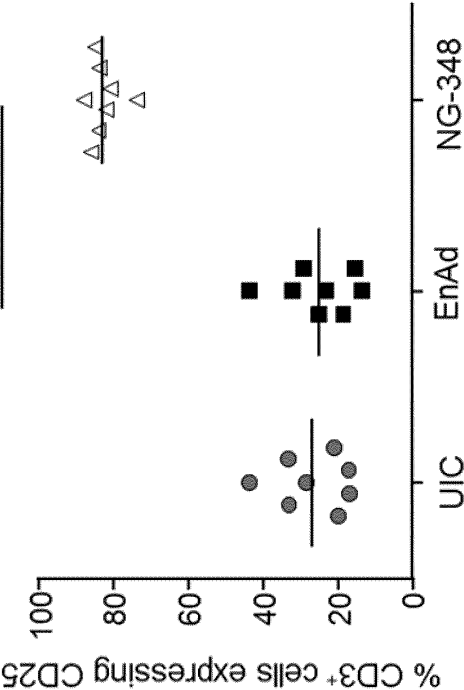


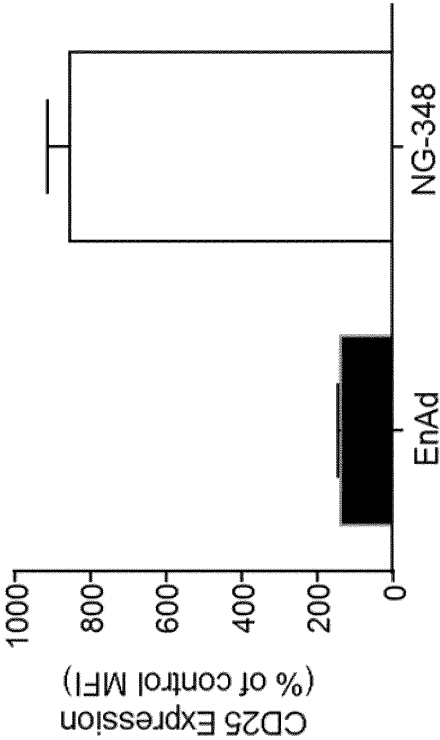
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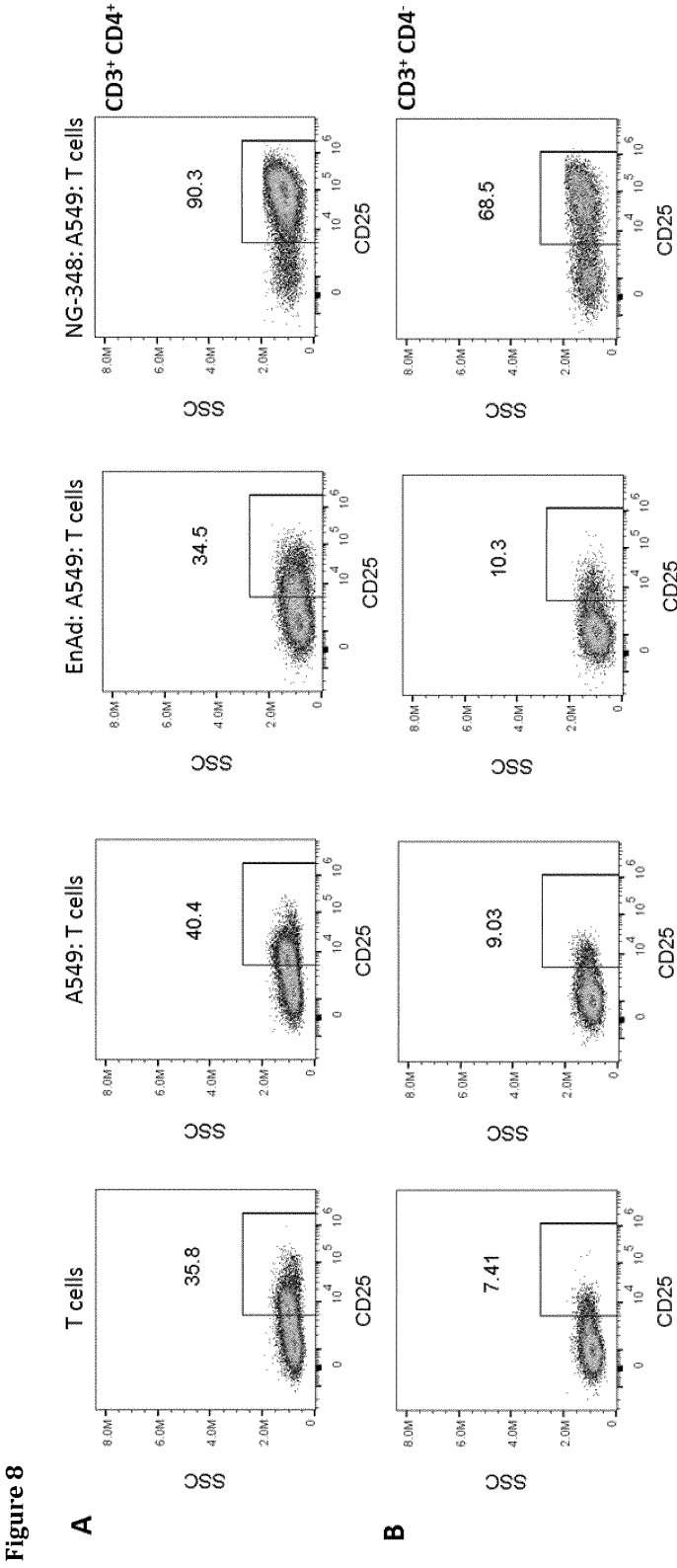


B



C





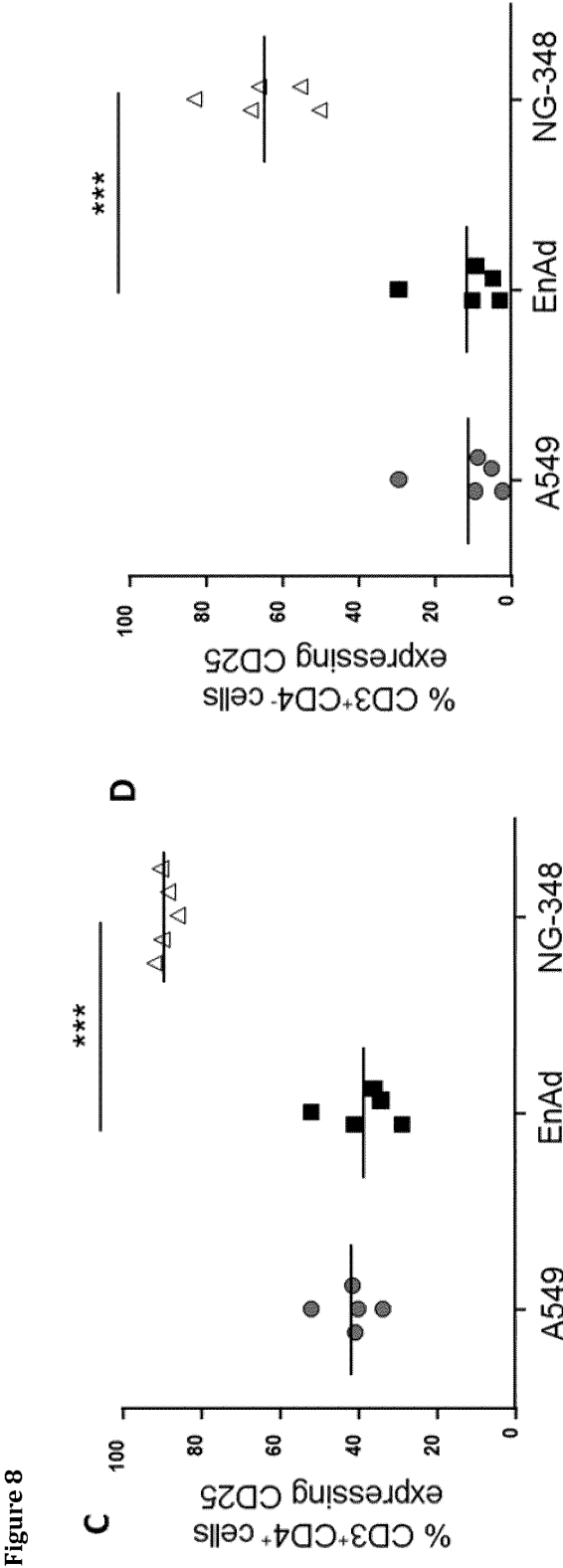


Figure 9

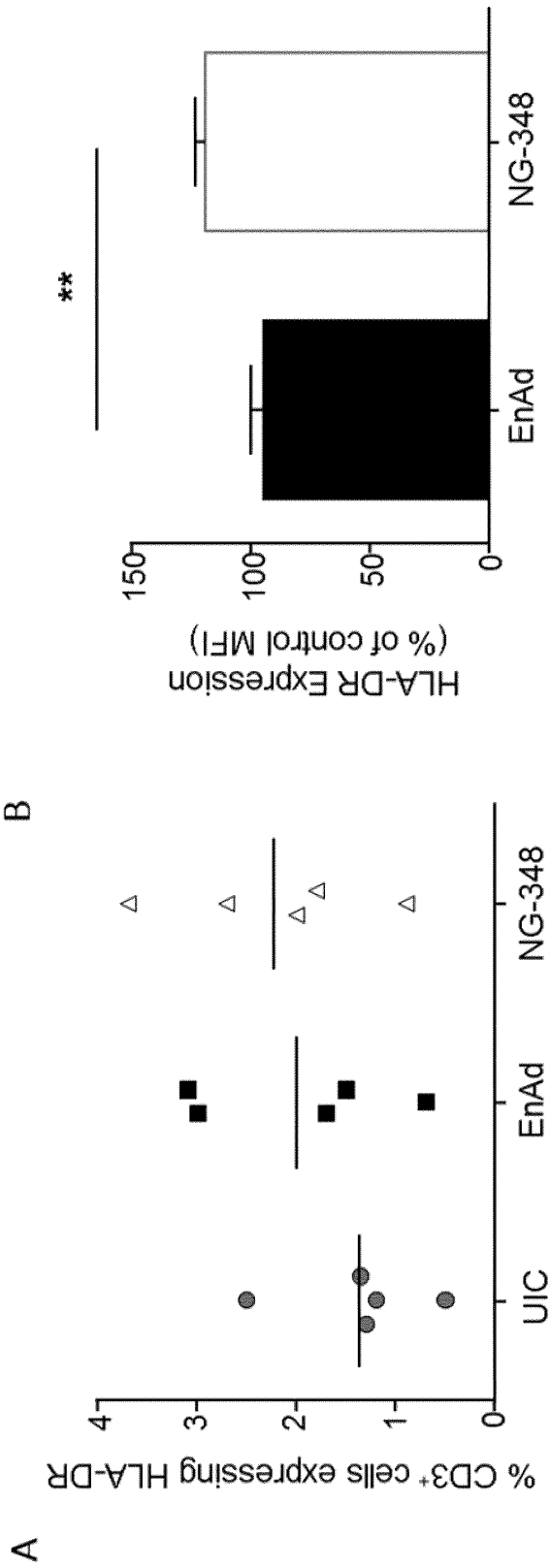


Figure 10

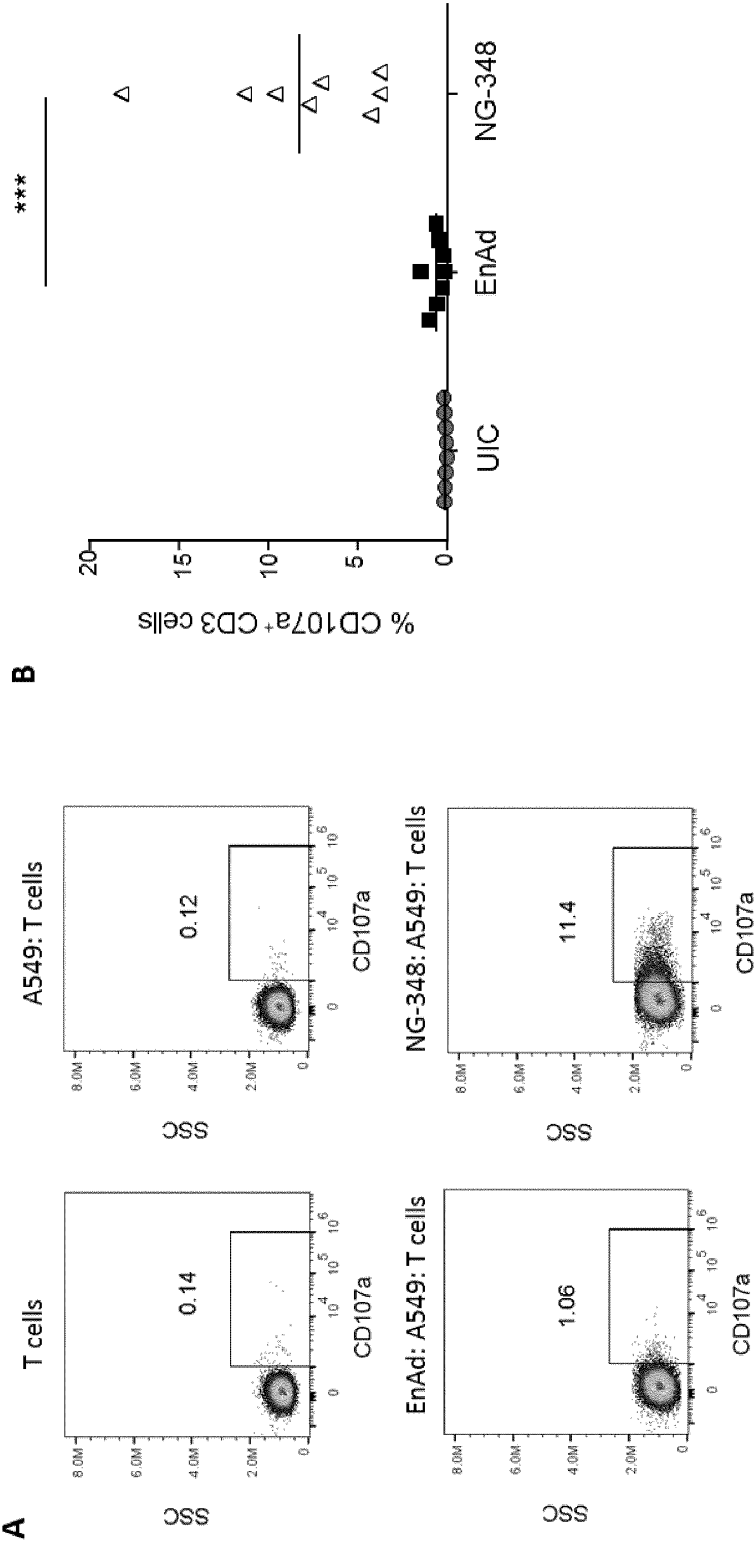


Figure 11

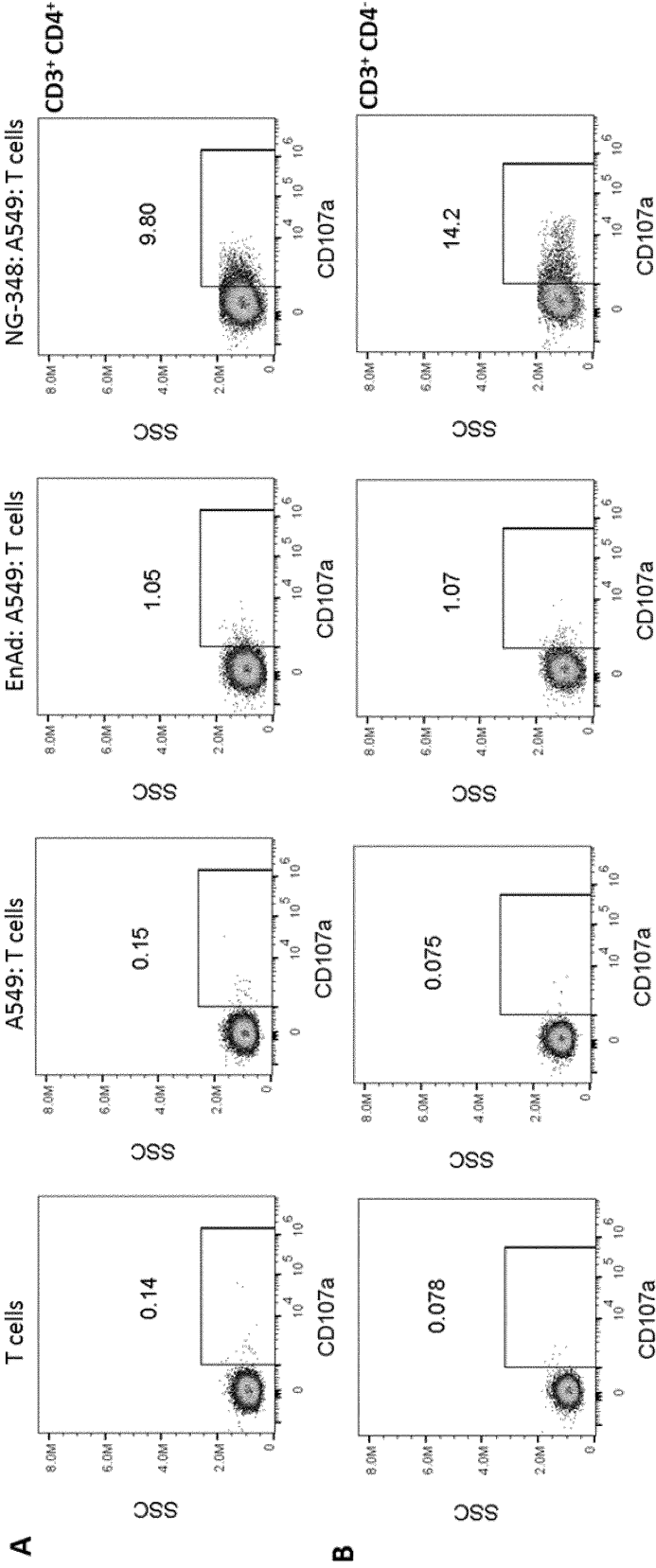
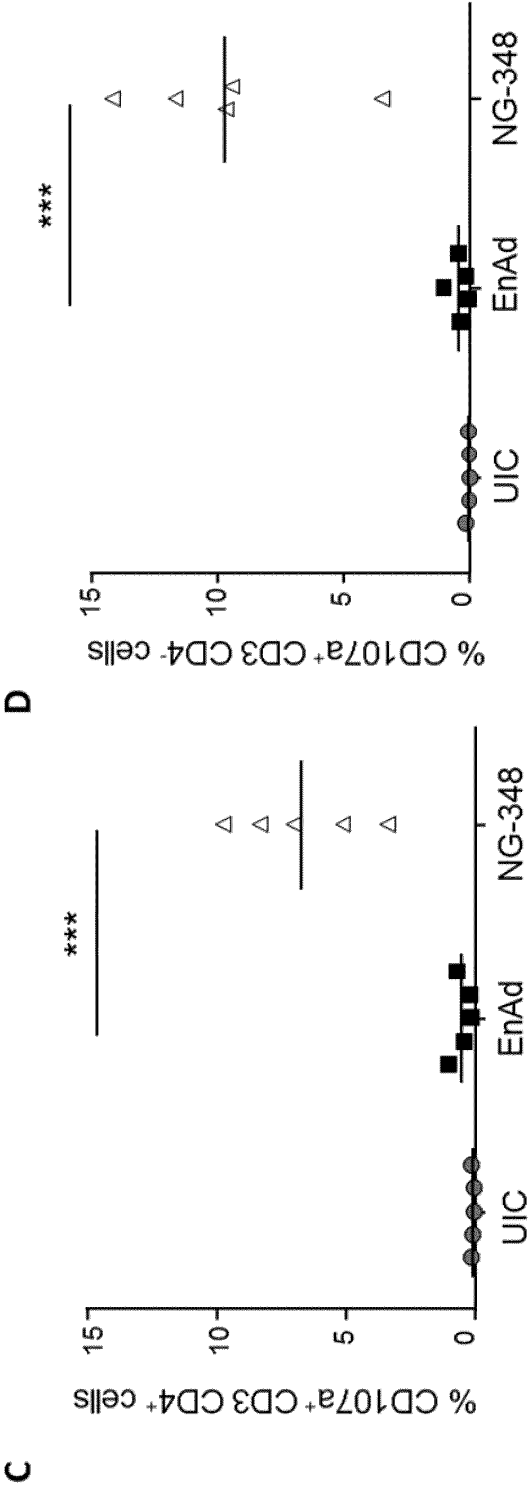


Figure 11



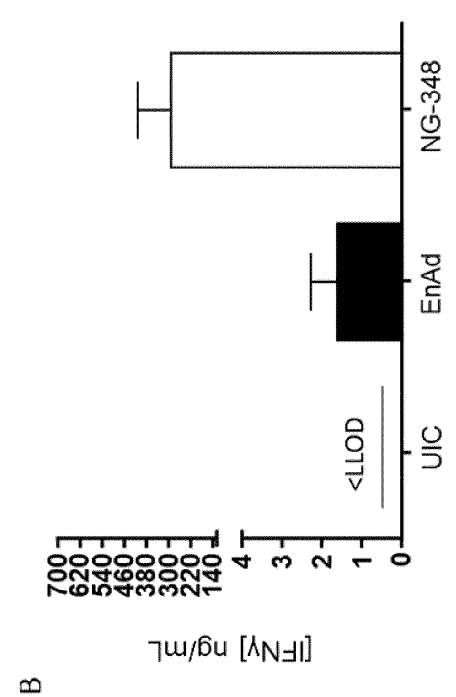


Figure 12

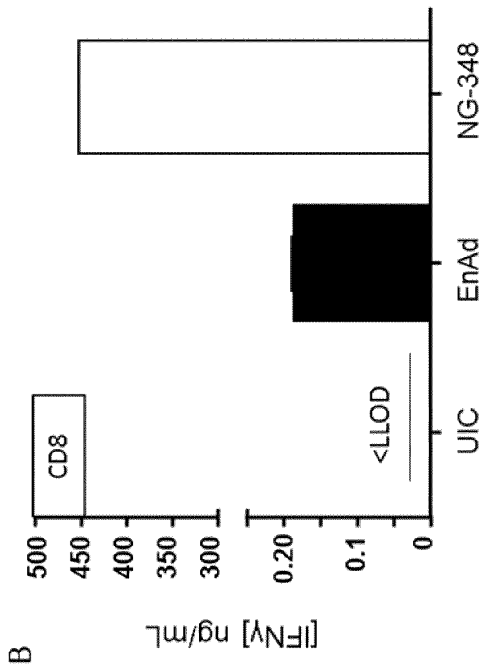


Figure 13

Figure 14

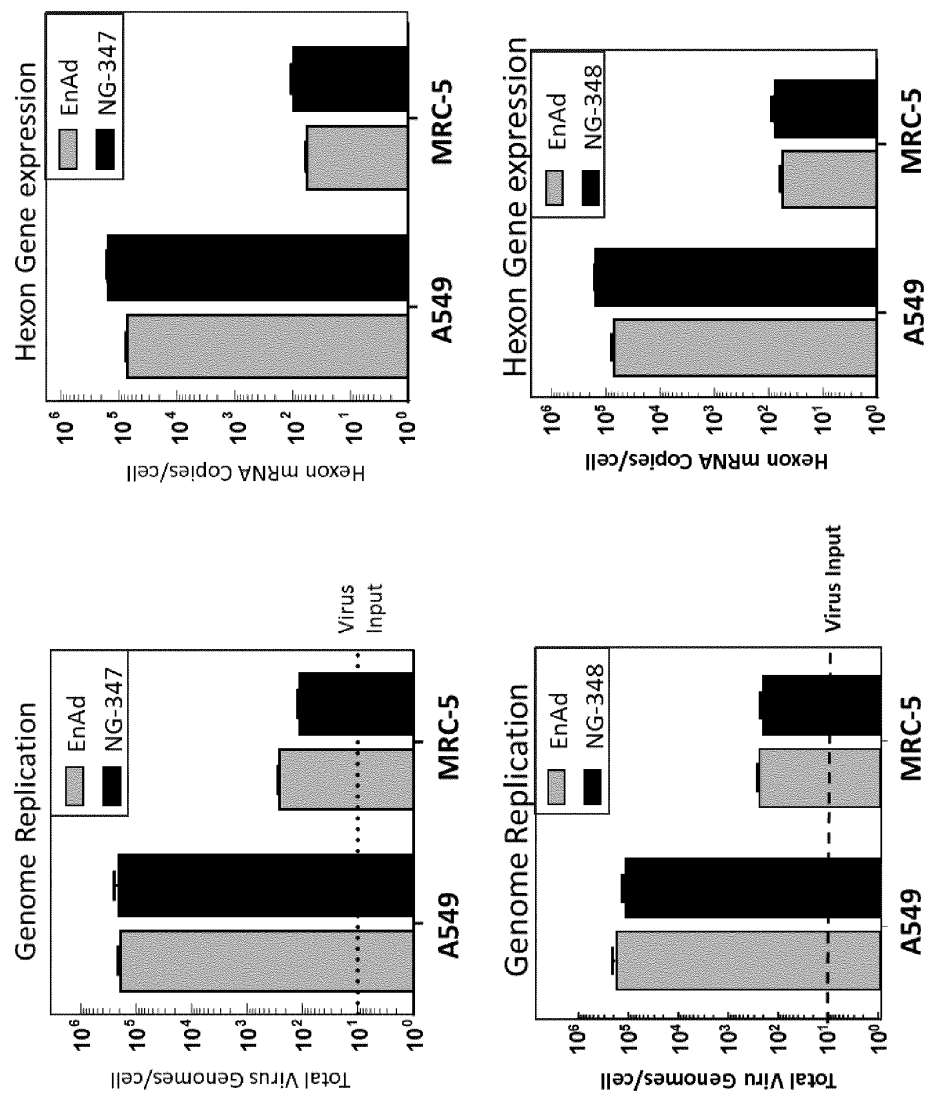


Figure 15

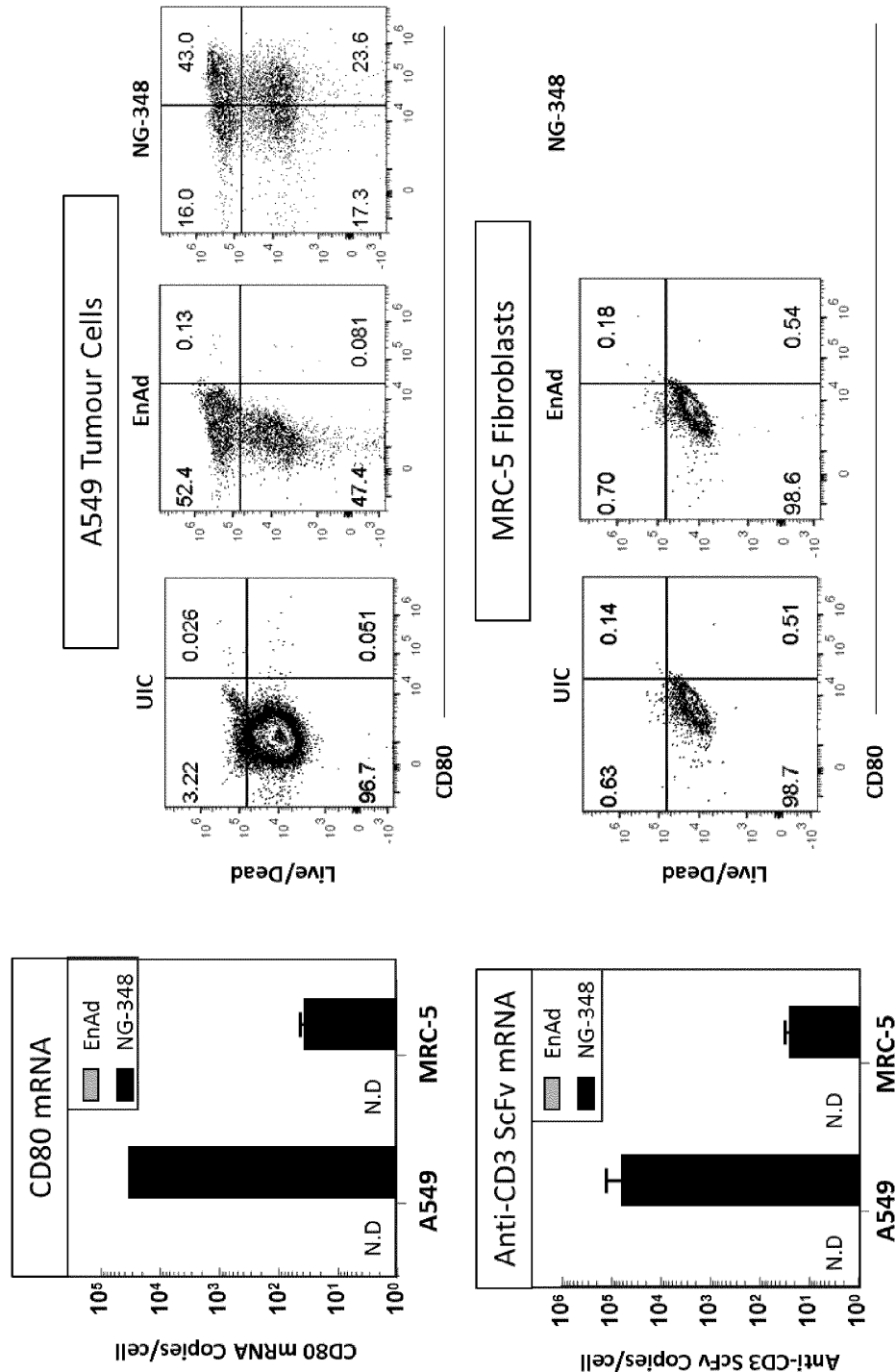
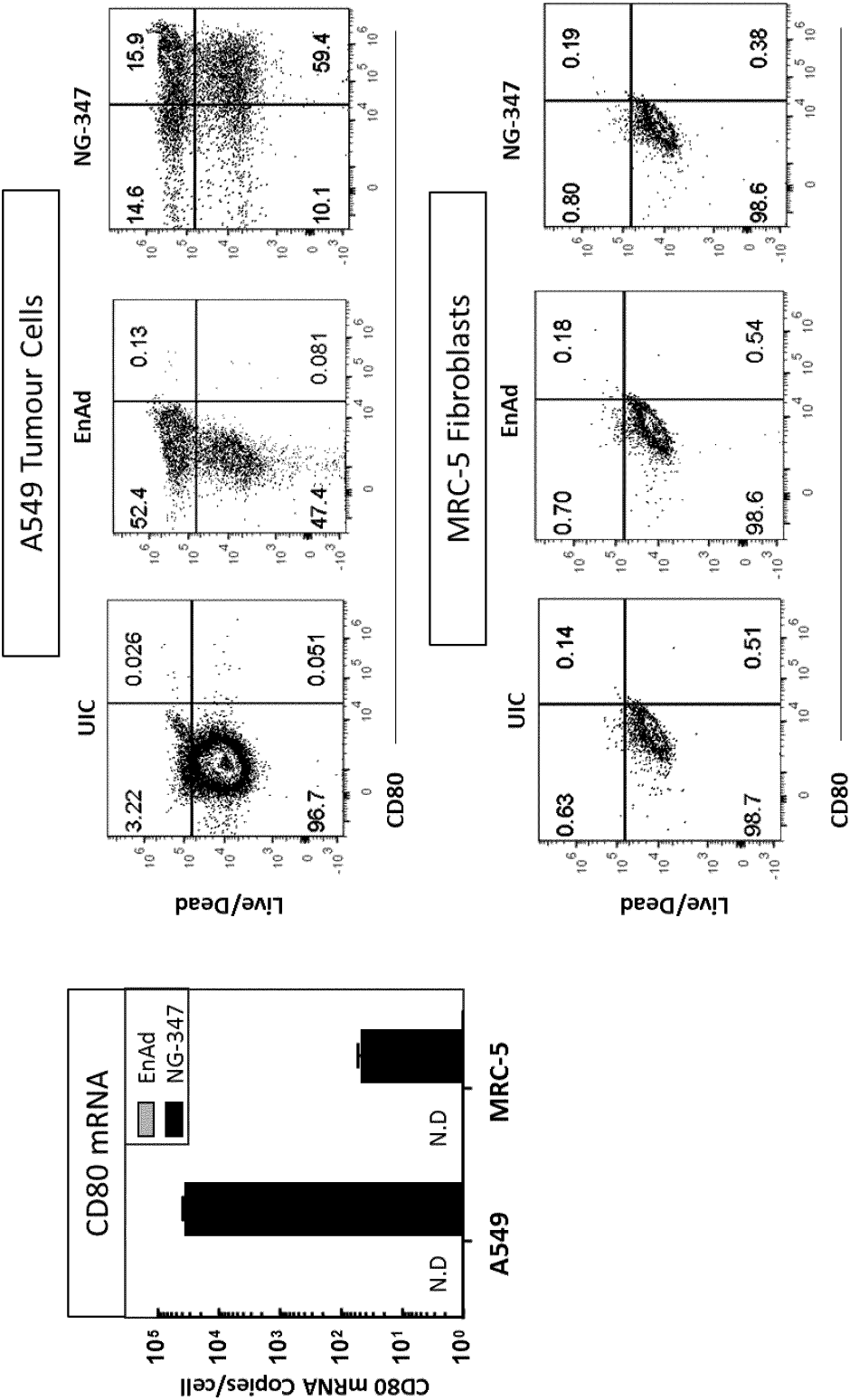


Figure 16



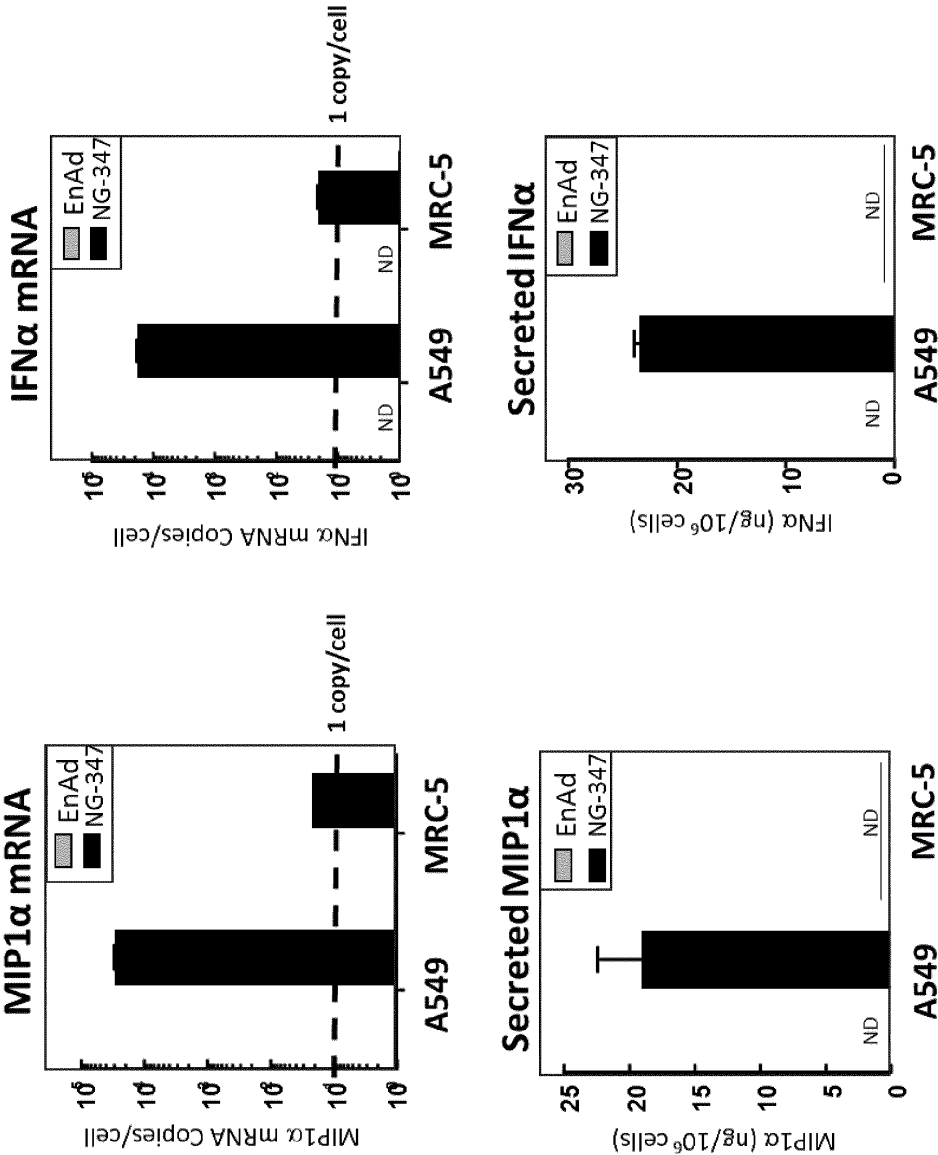


Figure 17

Figure 18

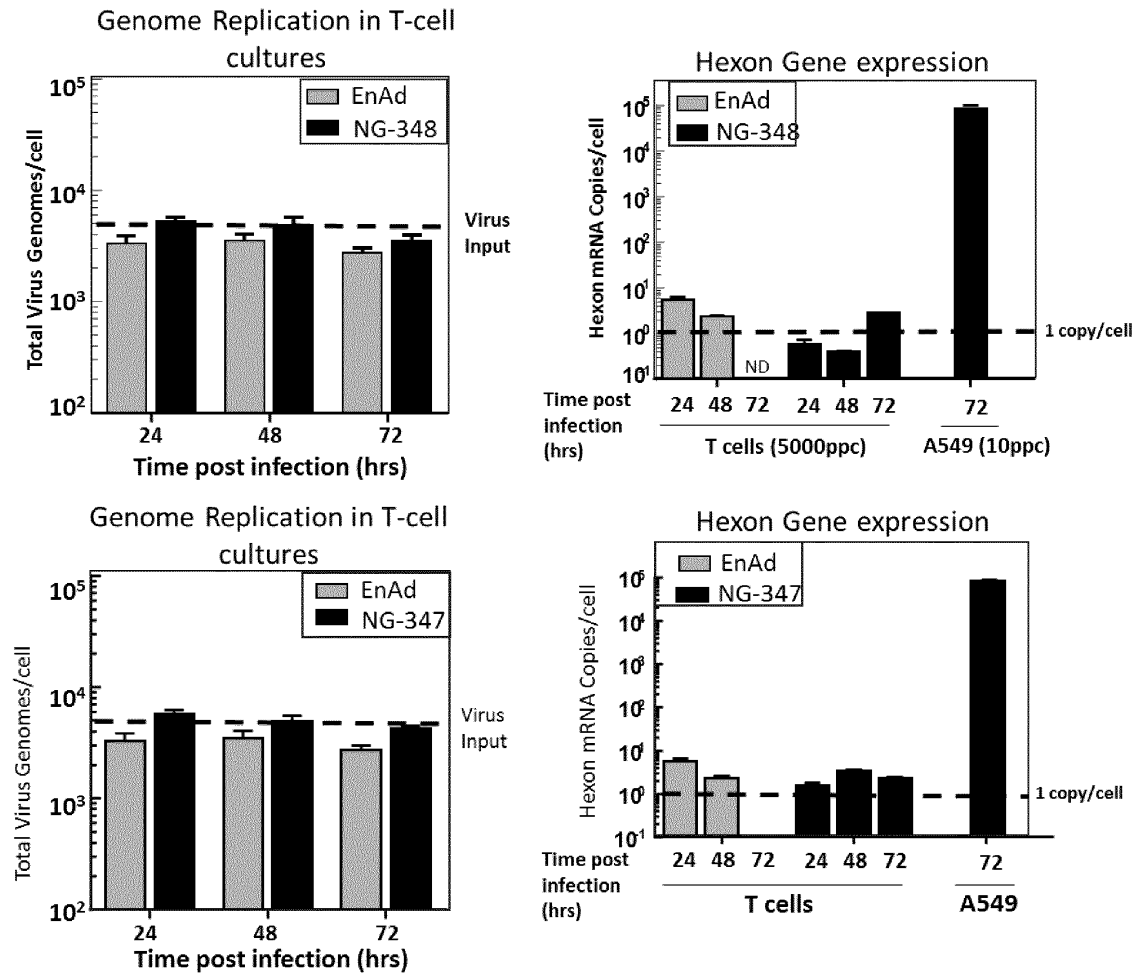


Figure 19

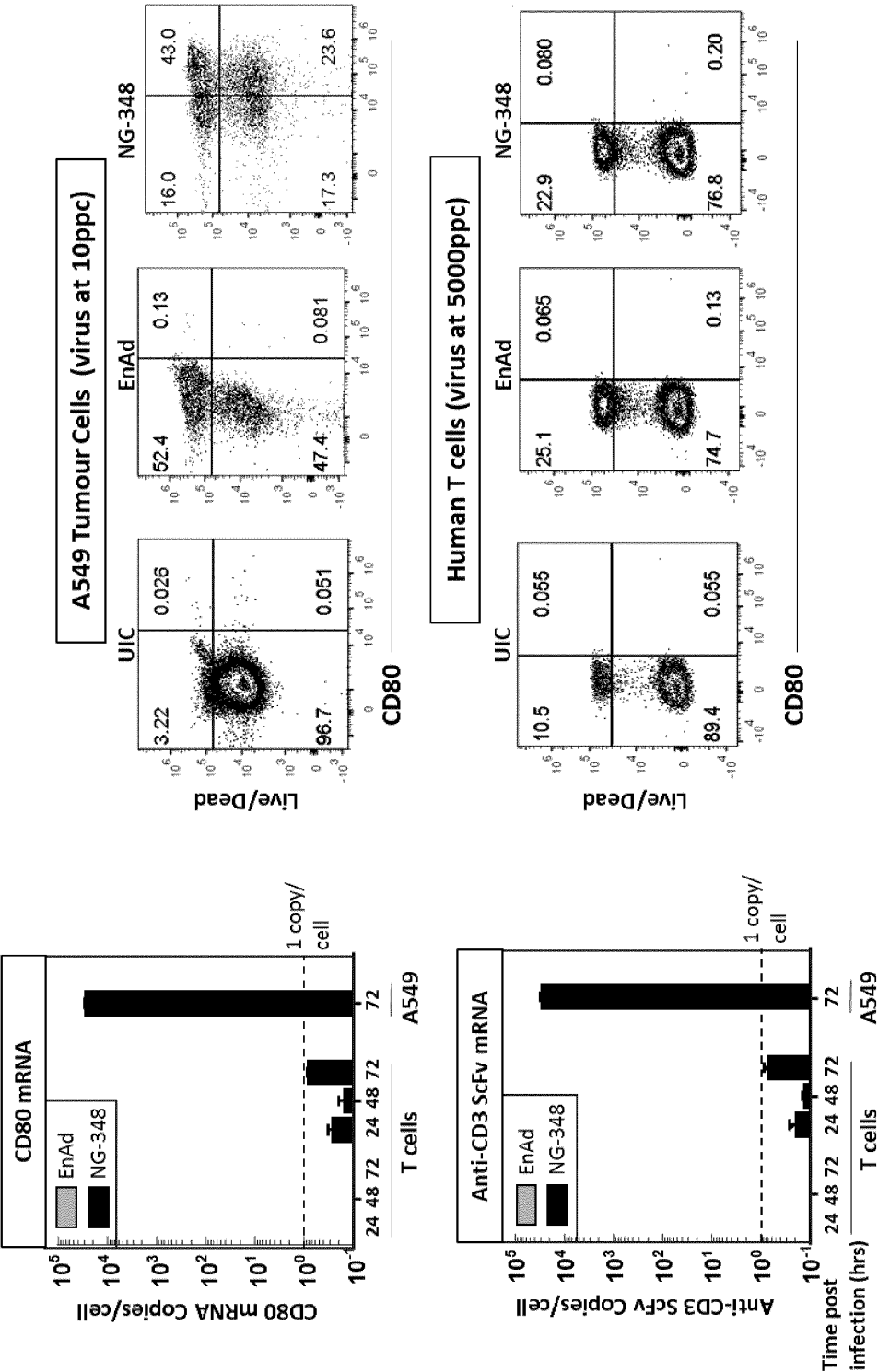
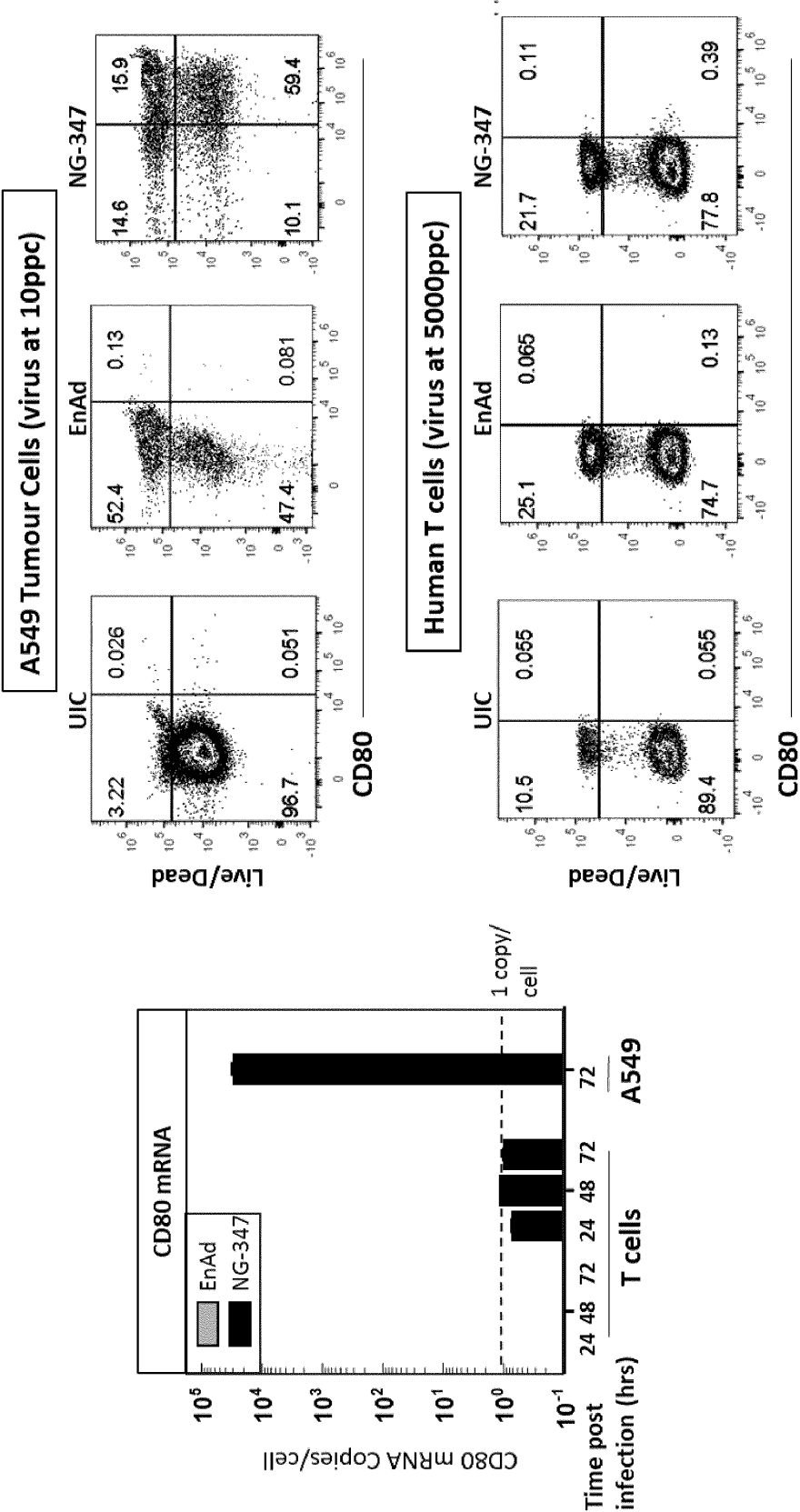


Figure 20



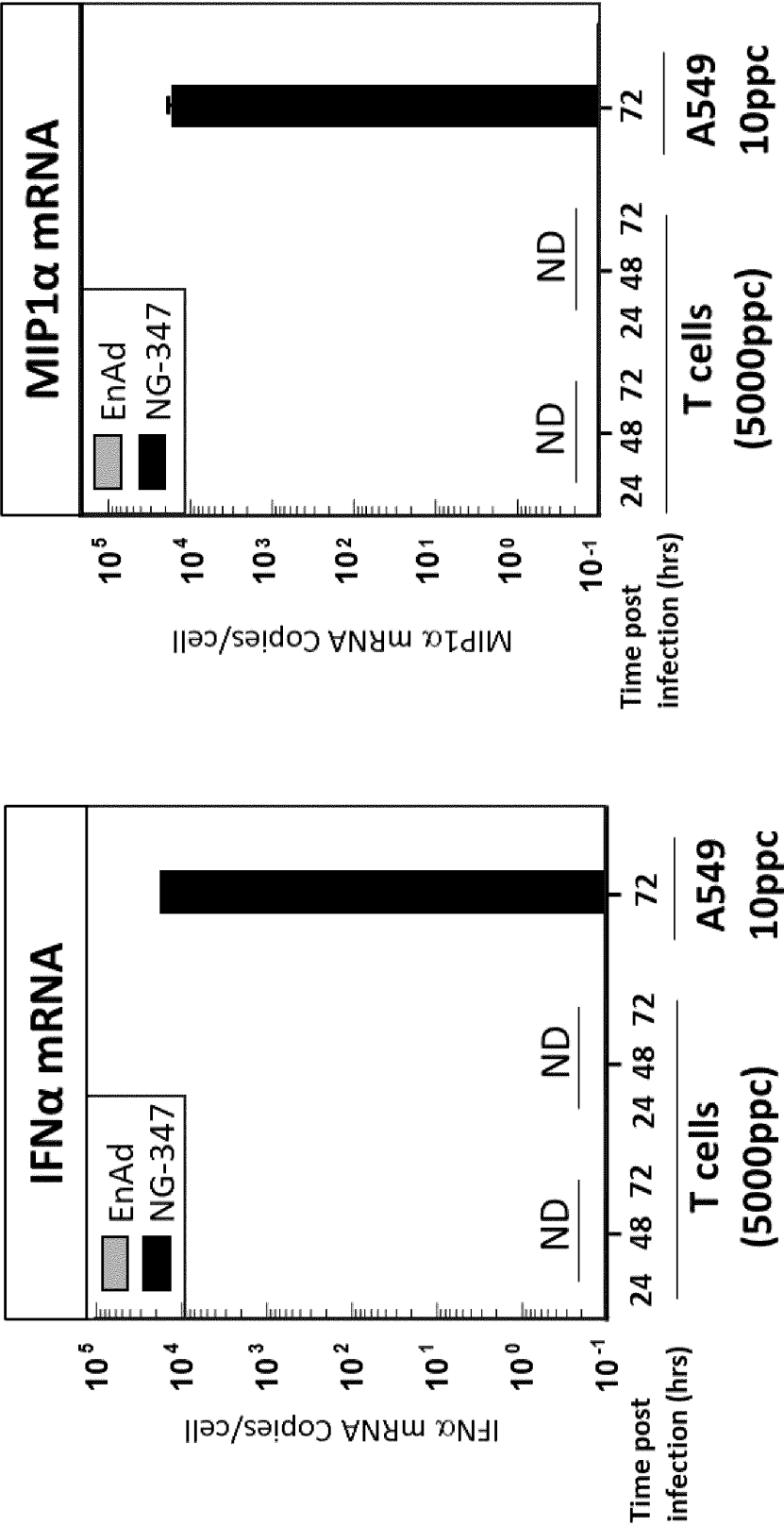


Figure 21

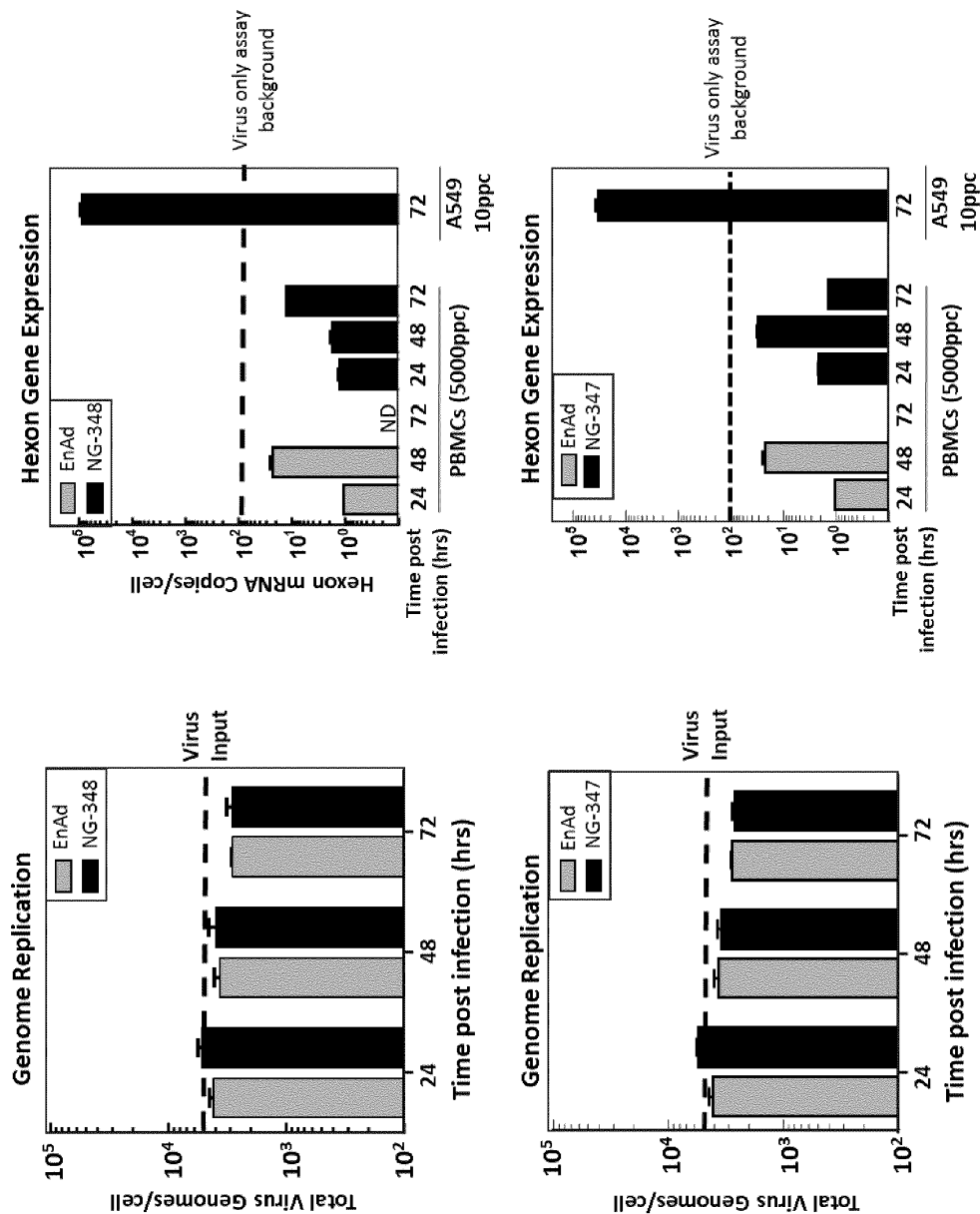


Figure 22

Figure 23

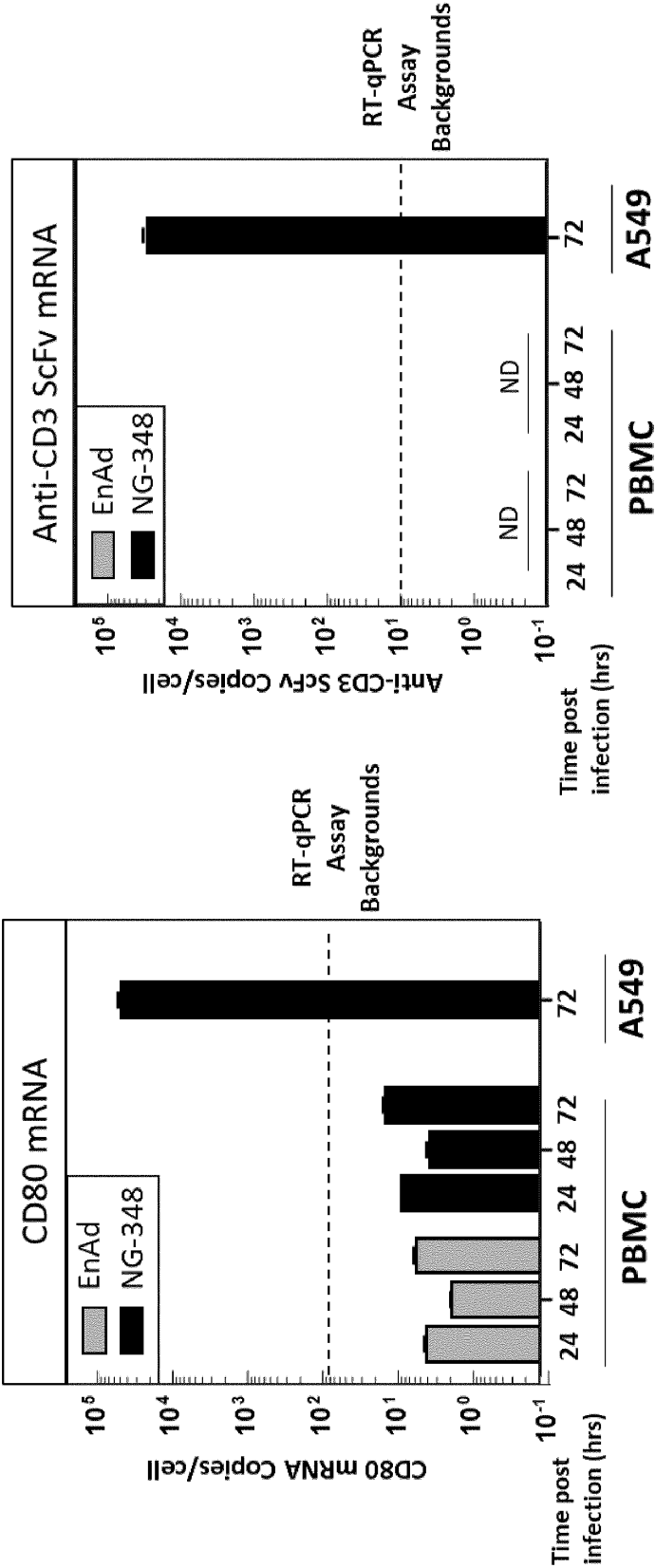


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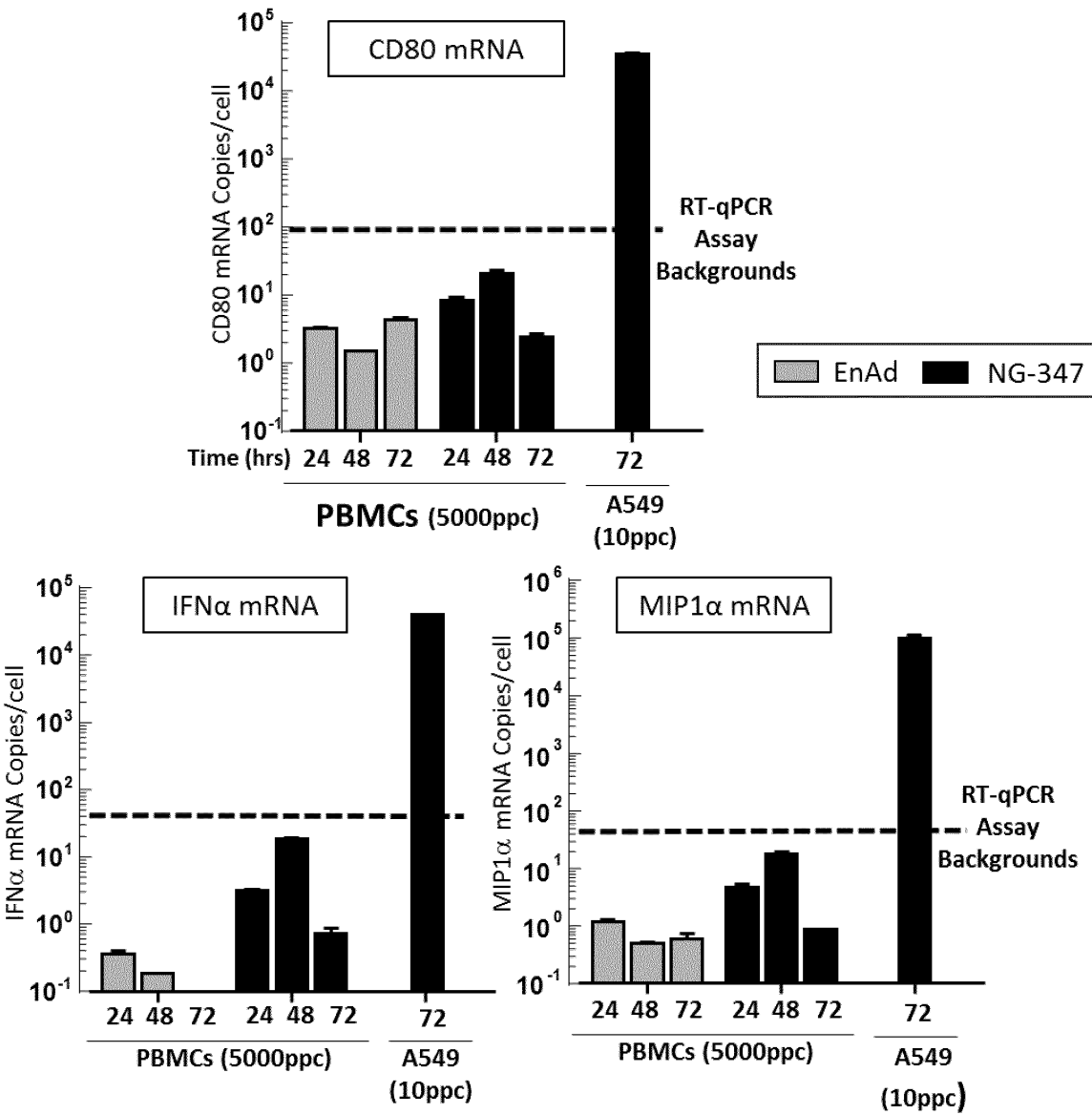


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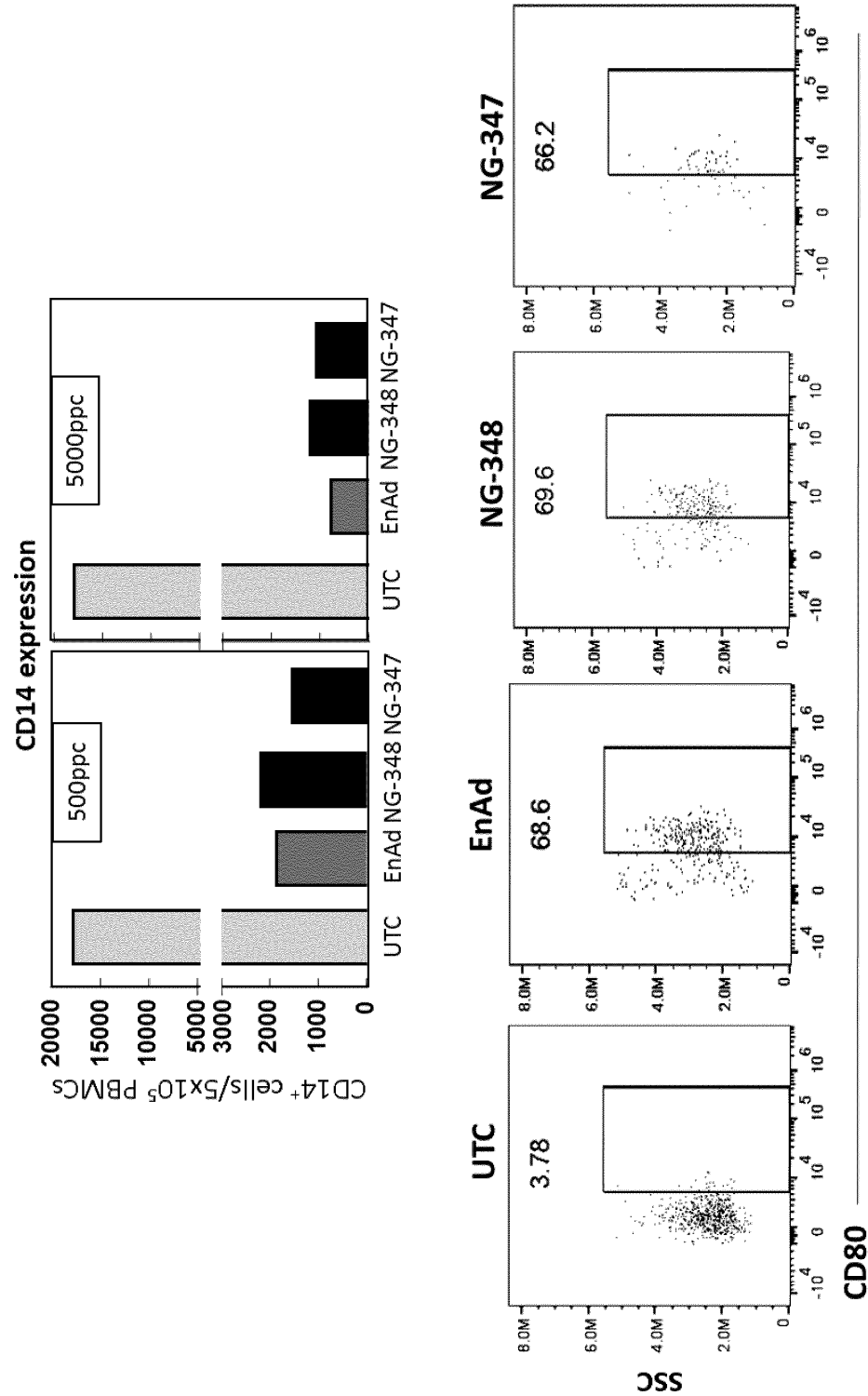


Figure 26

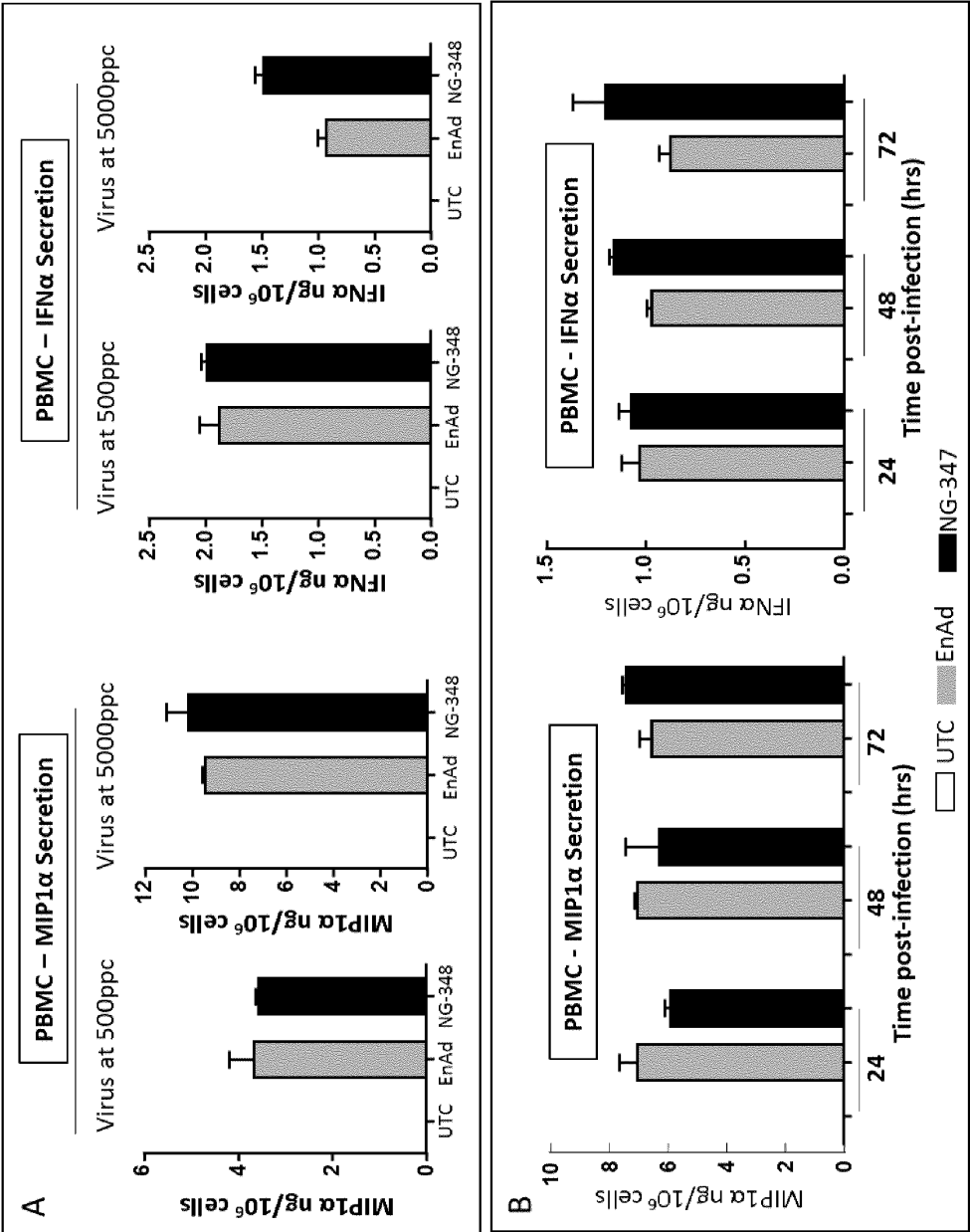


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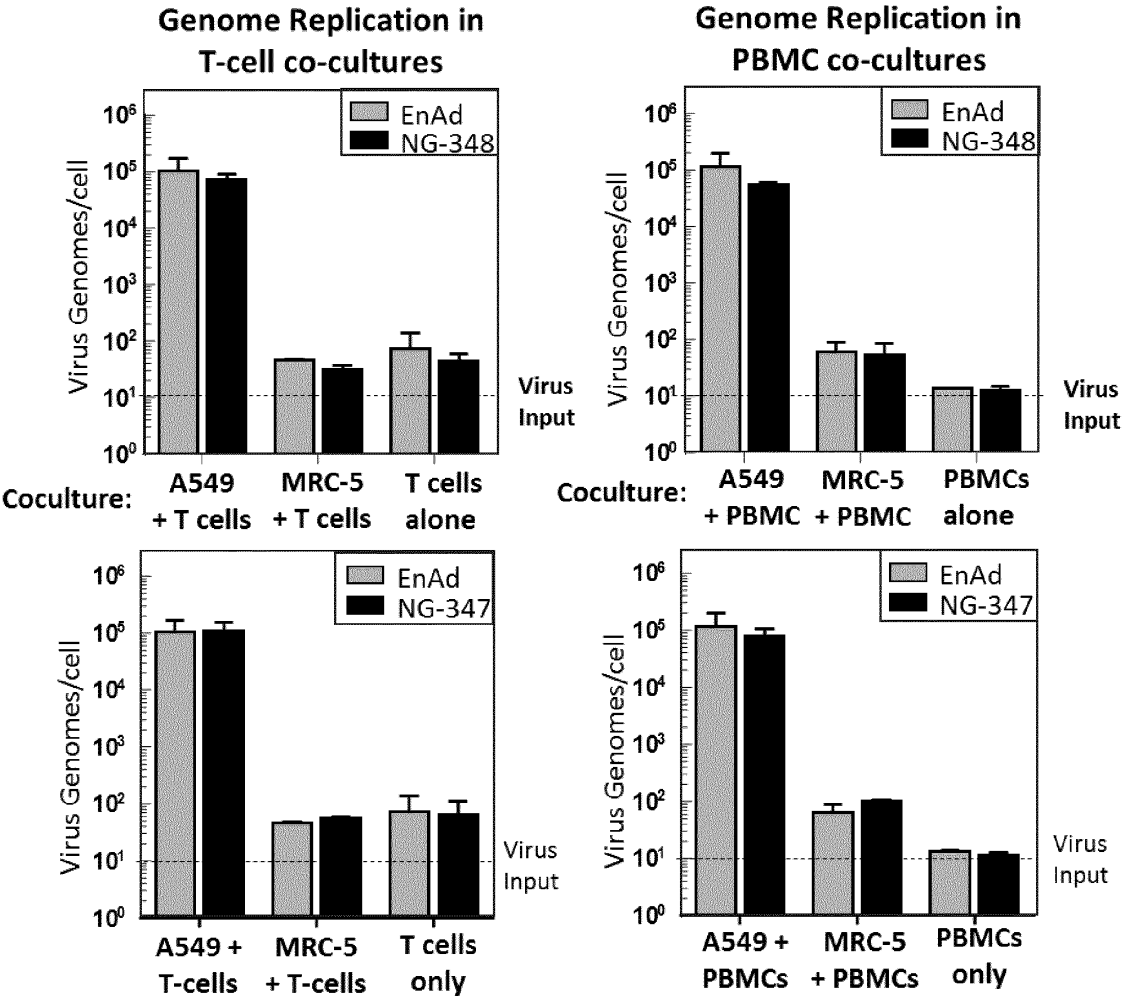


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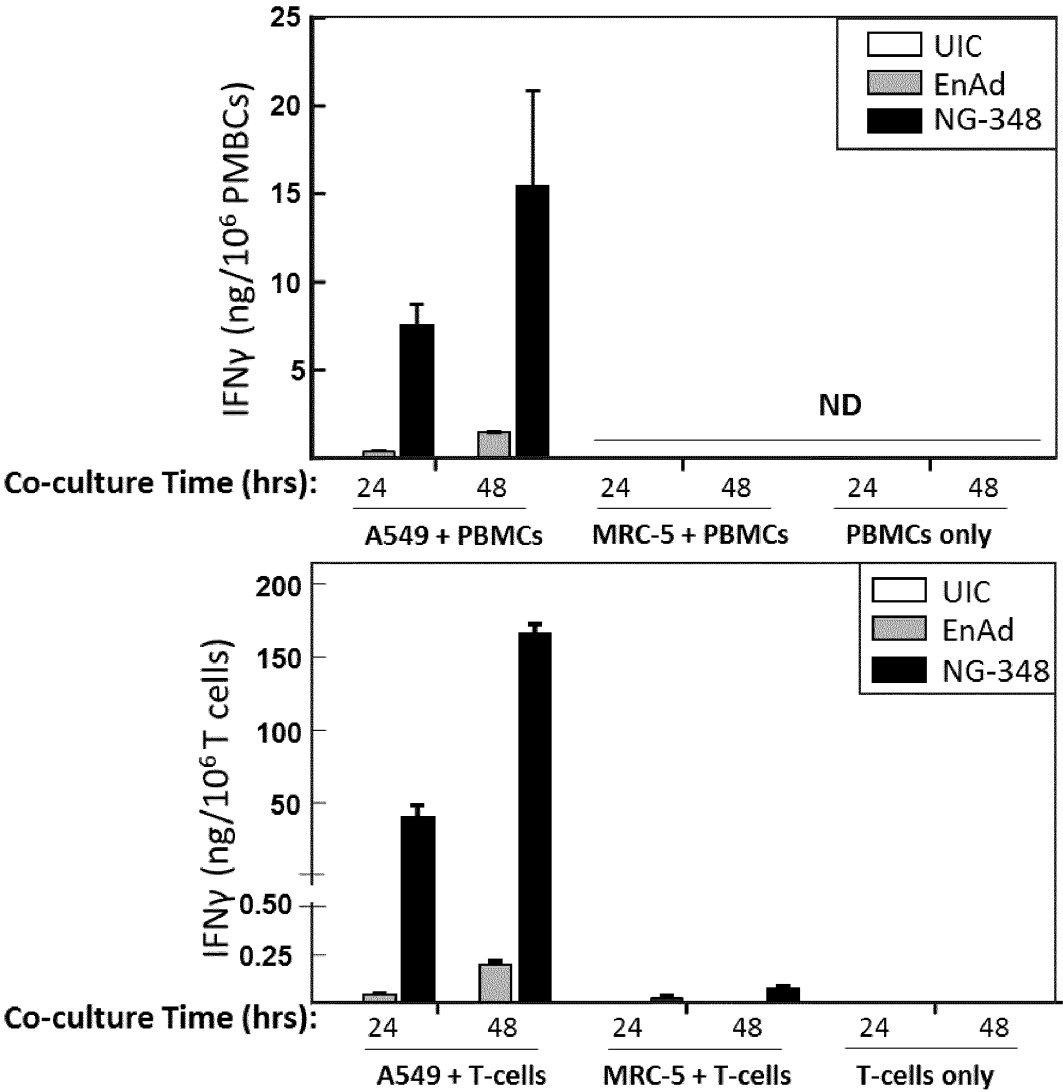


Figure 29

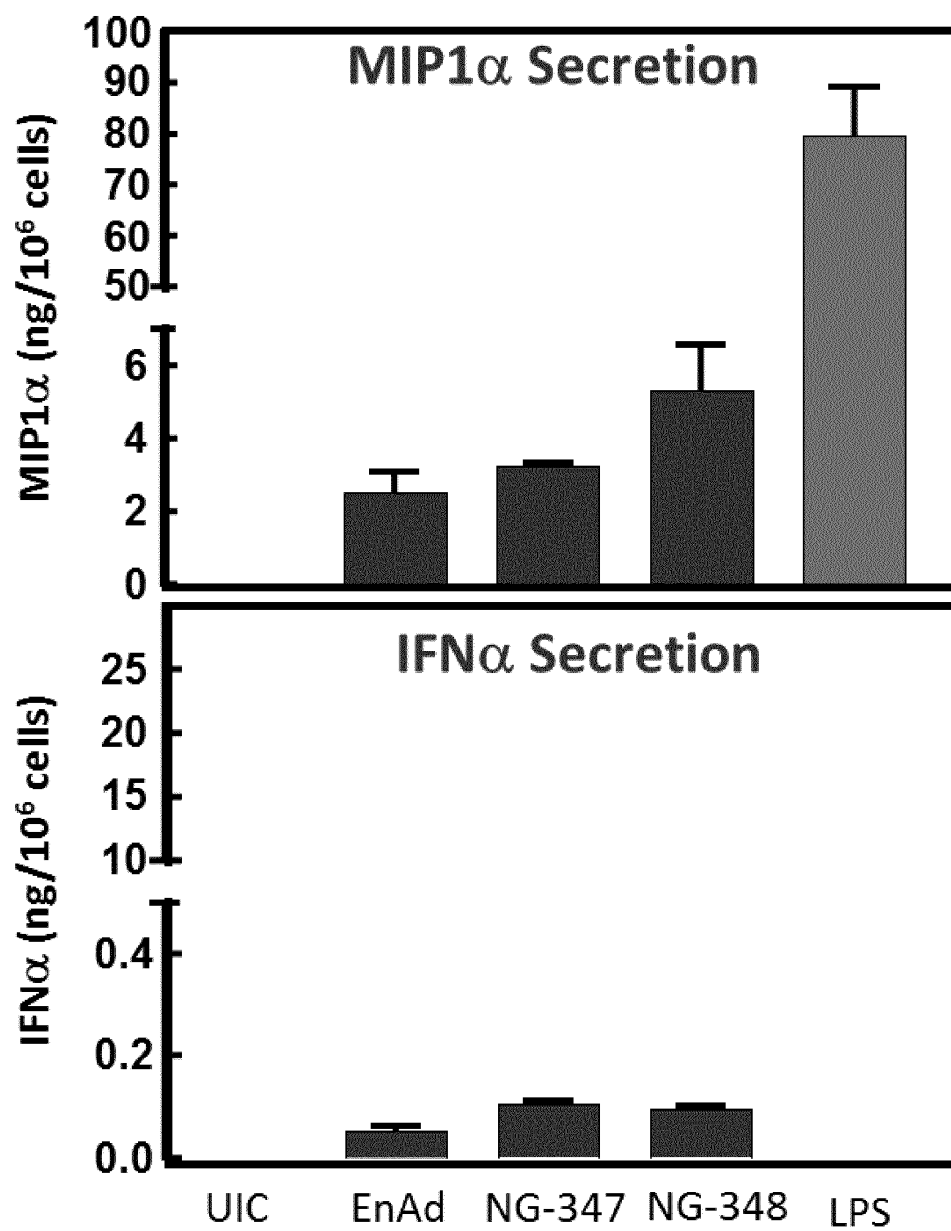


Figure 30

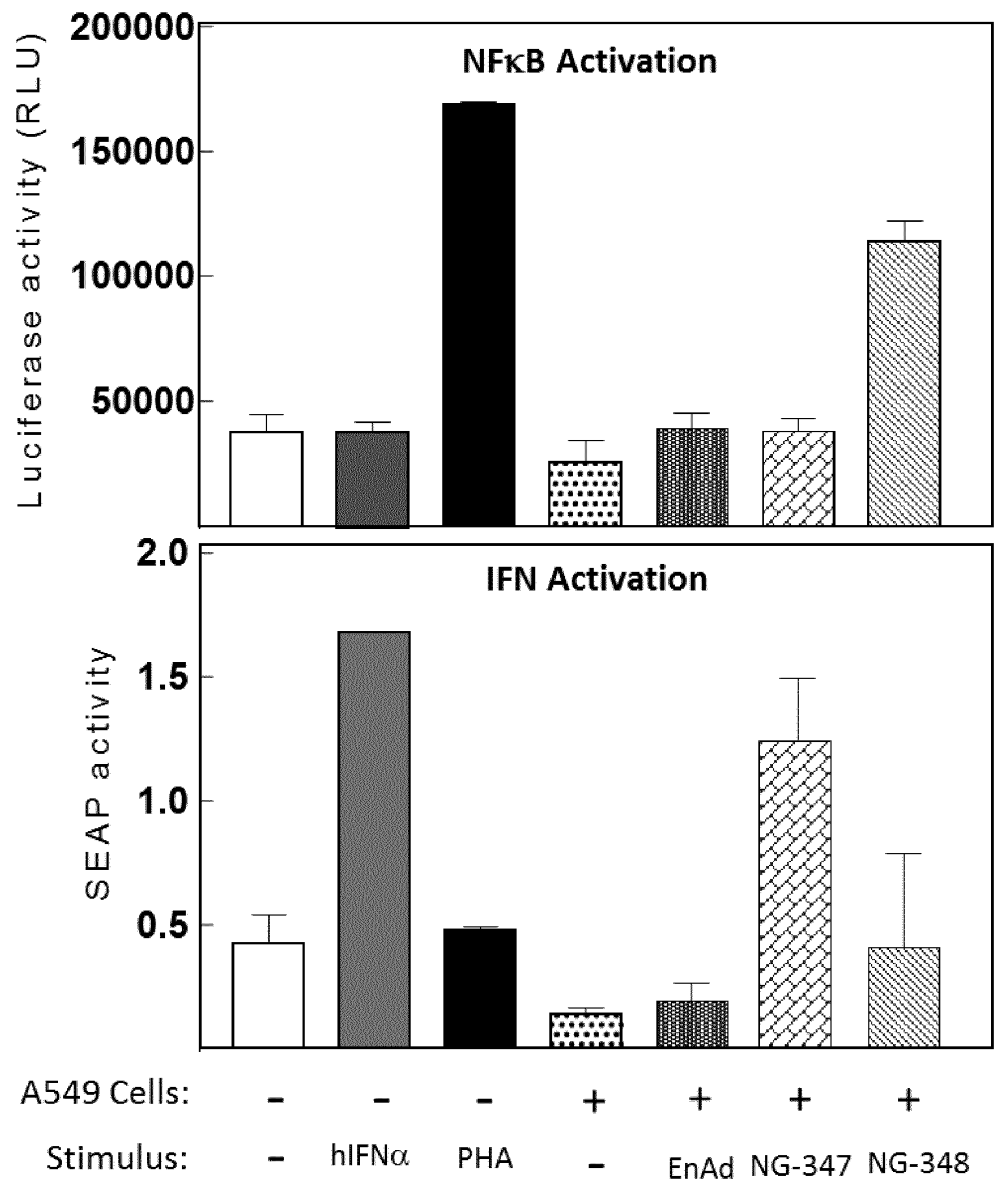


Figure 31

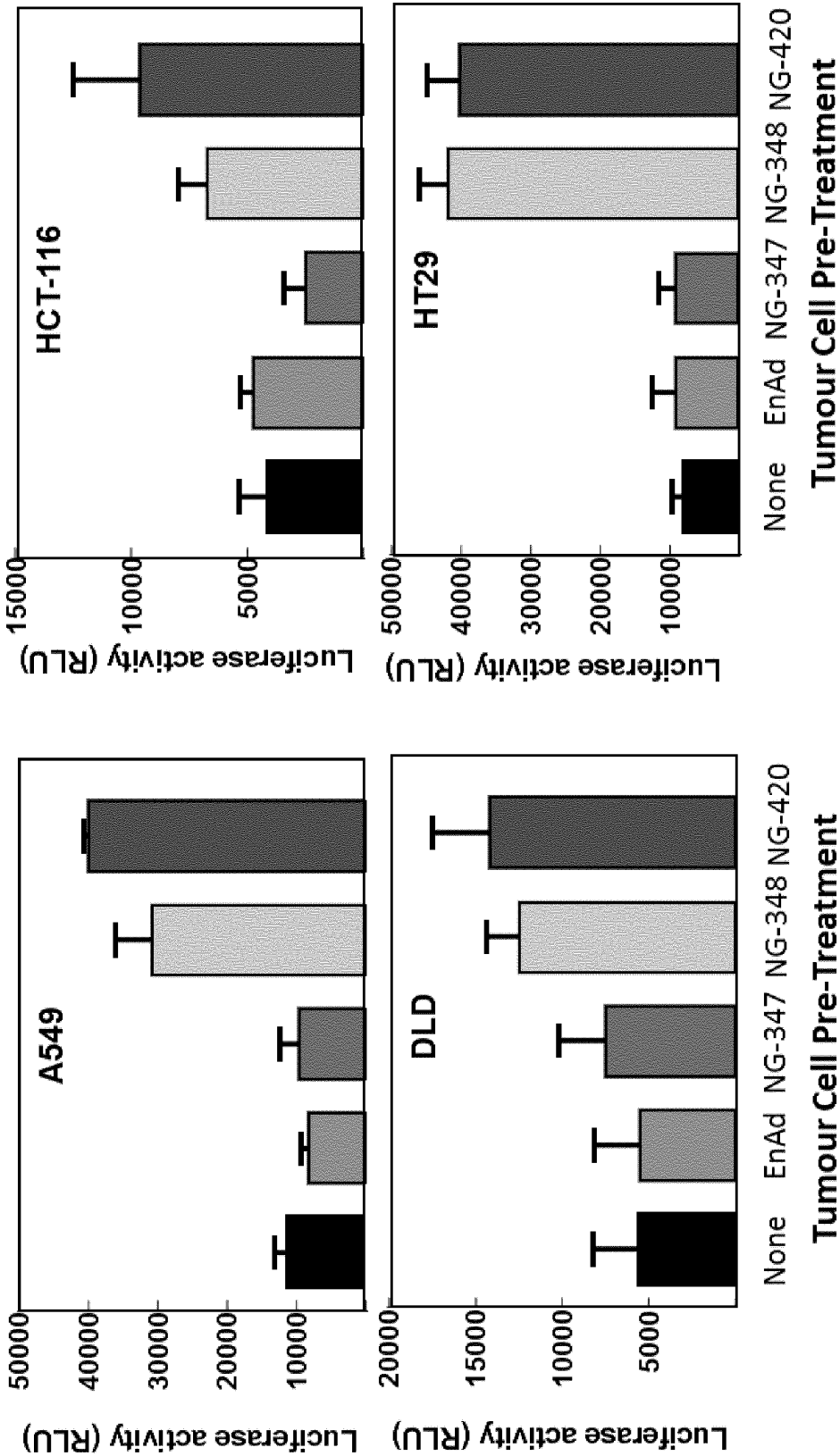


Figure 32

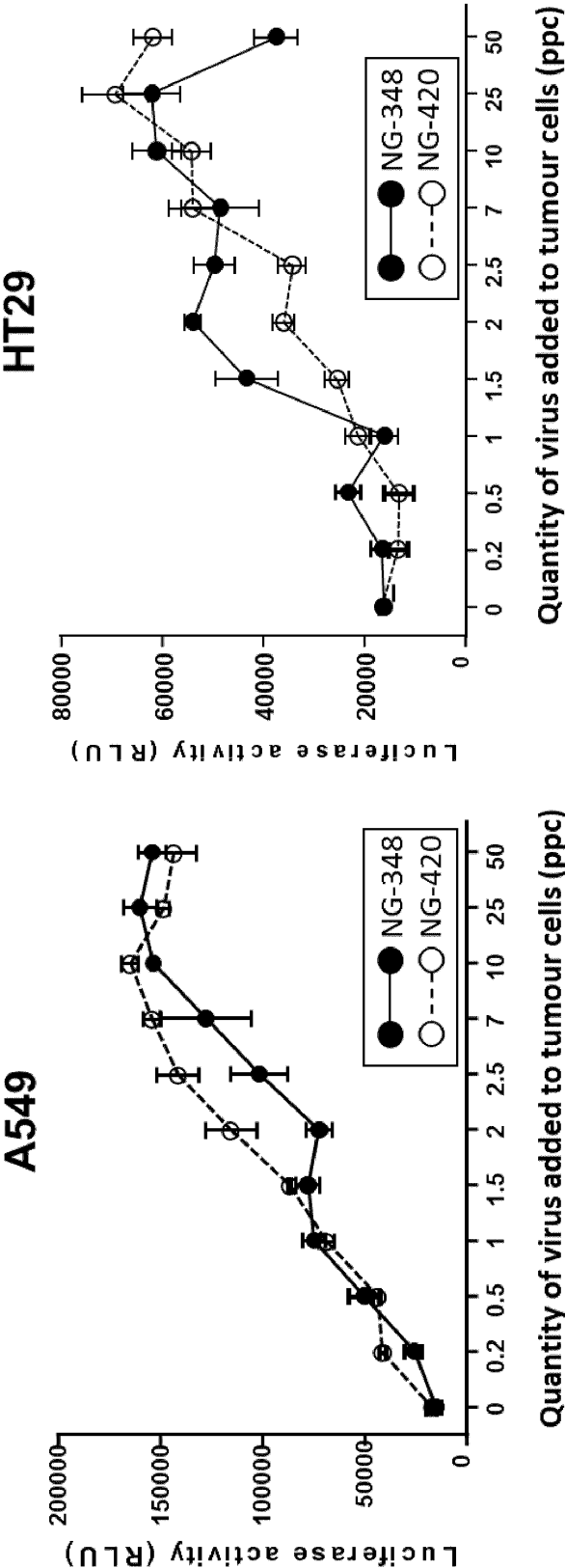
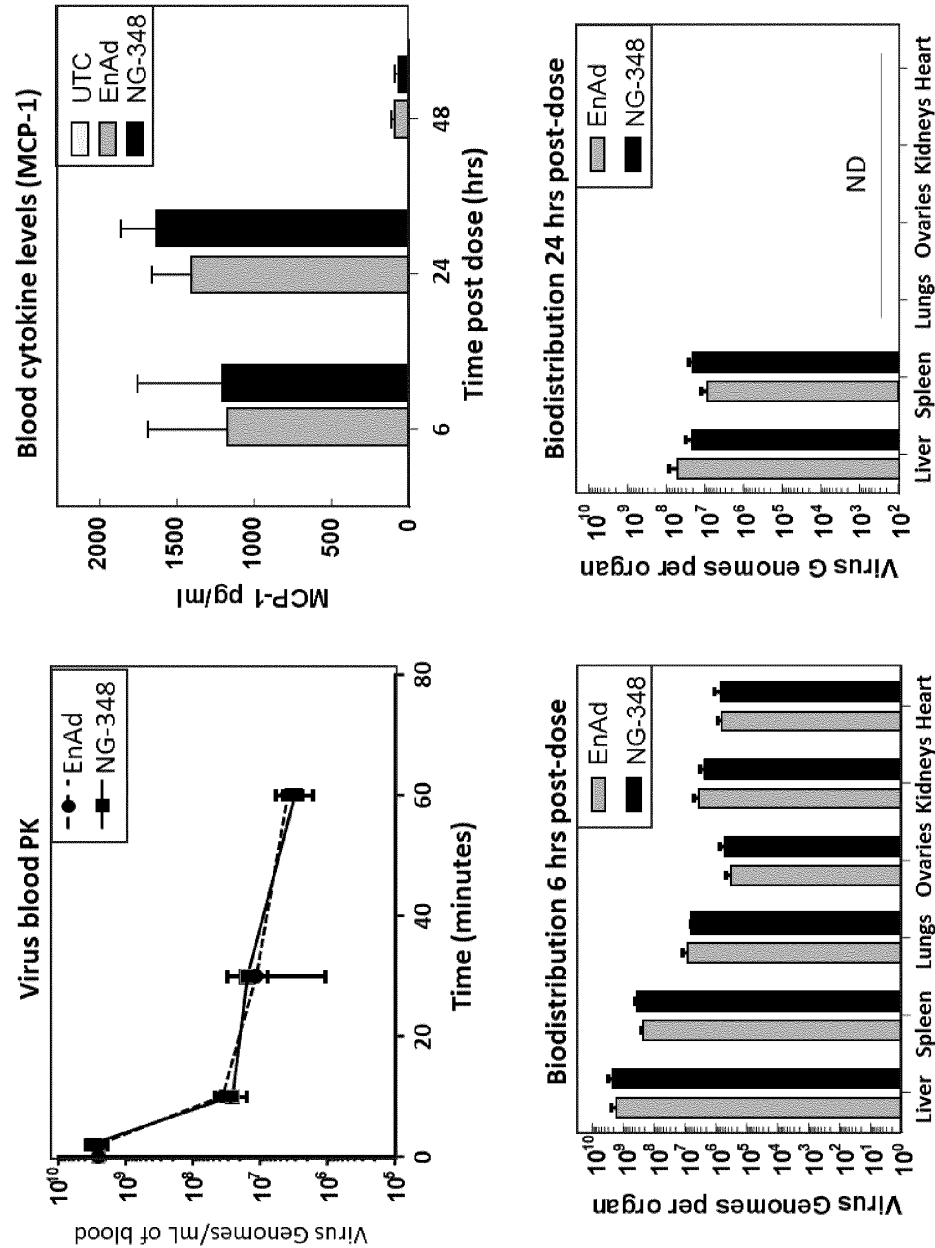


Figure 33



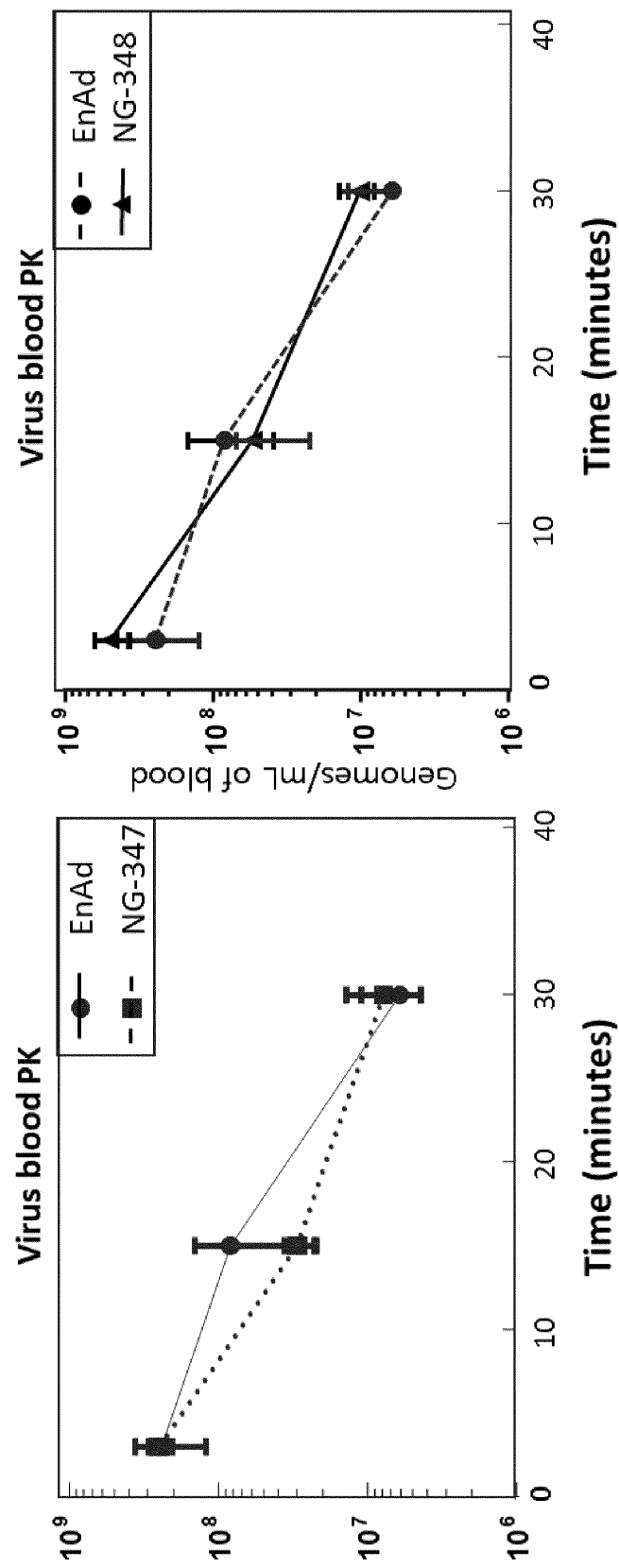


Figure 34

Figure 35

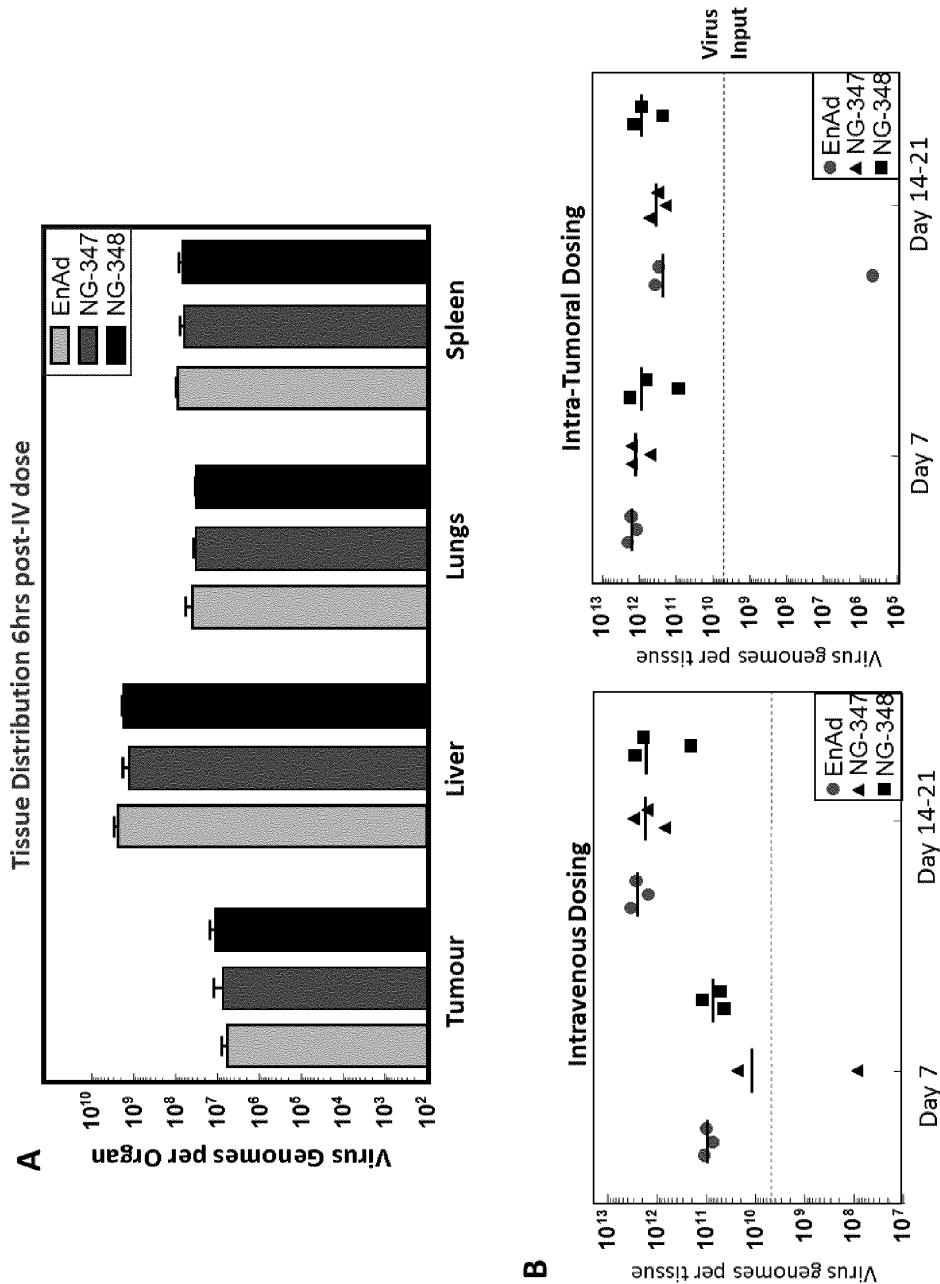


Figure 36

Virus hexon mRNA expression in HCT-116 tumours

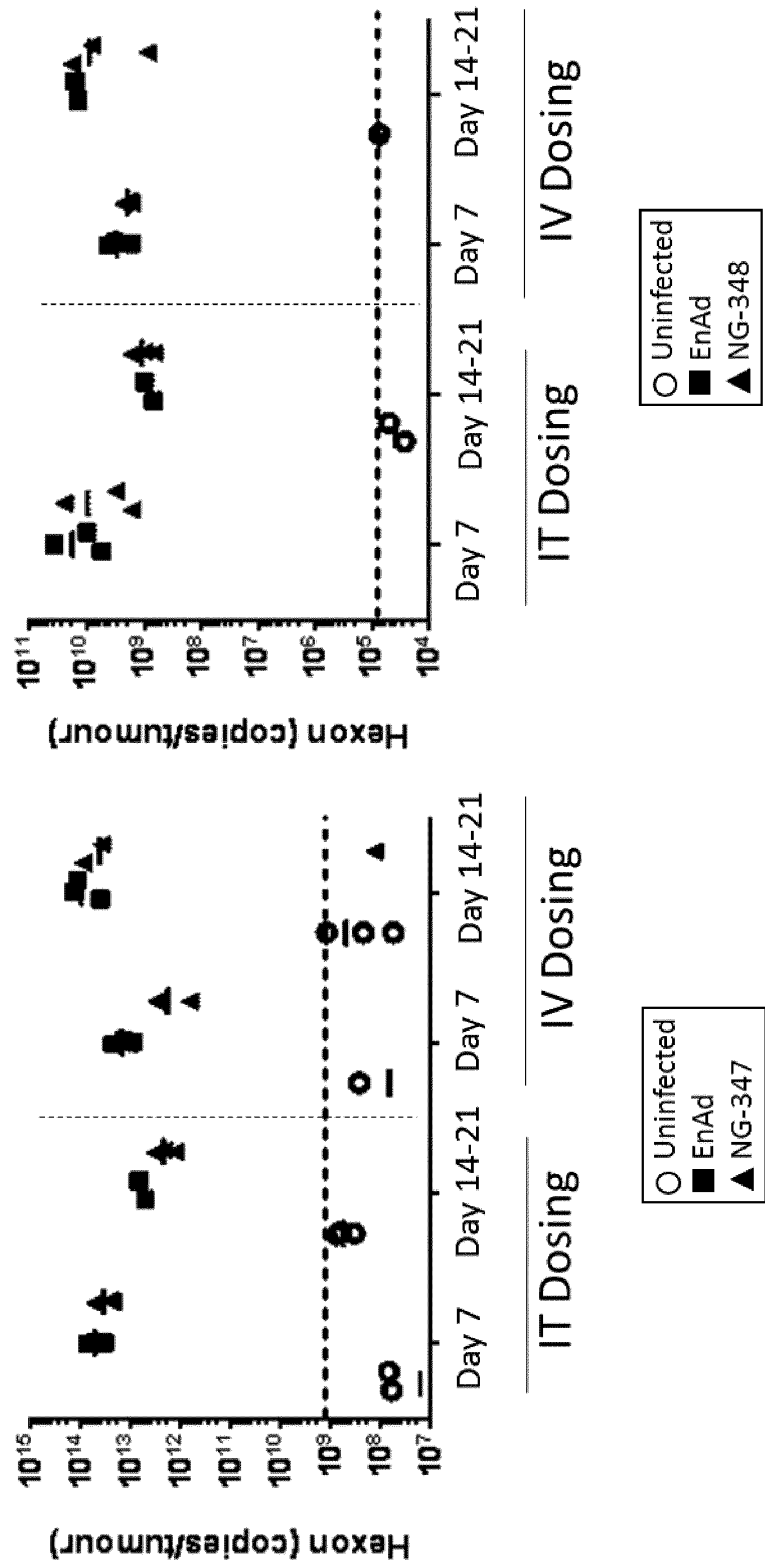


Figure 37

Hexon and CD80 transgene mRNA expression by NG-348 in HCT-116 tumours

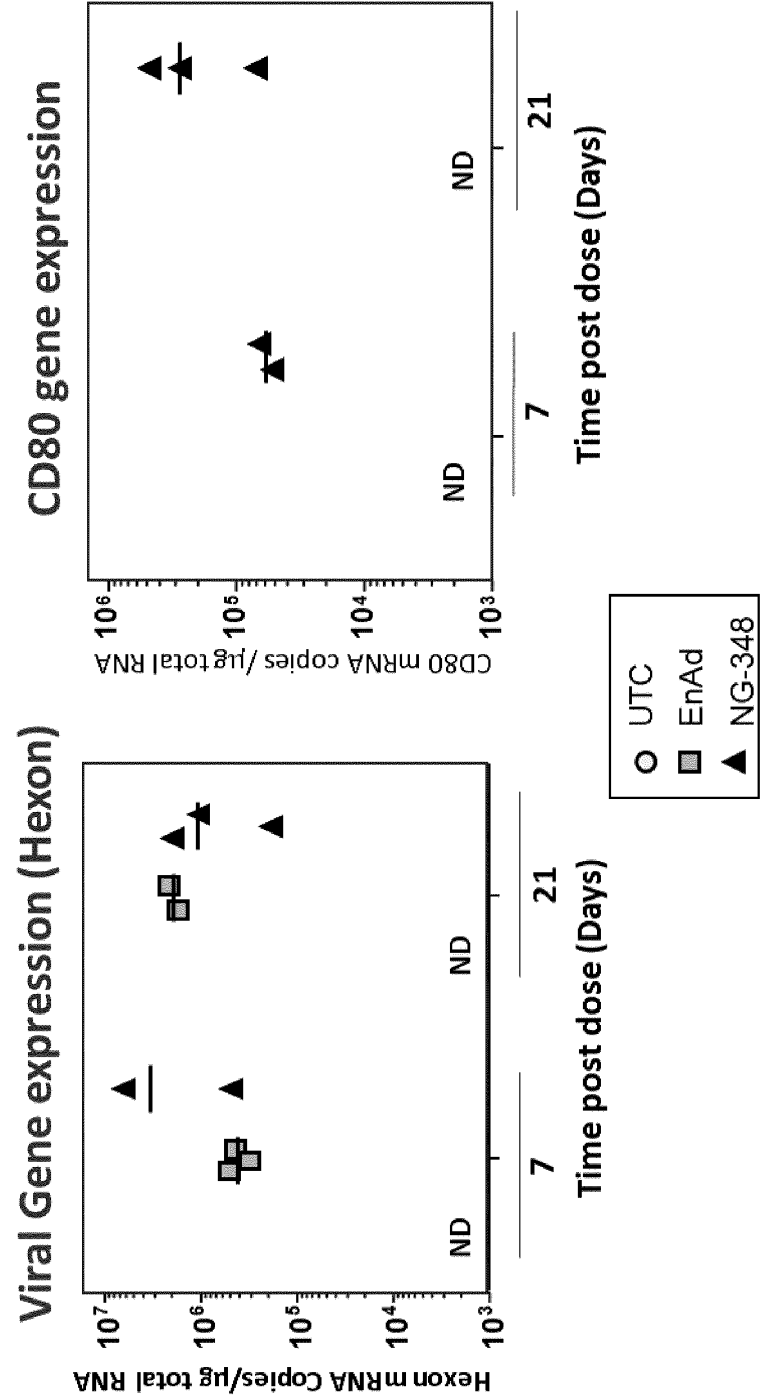


Figure 38

Anti-CD3-ScFv and CD80 transgene mRNA expression by NG-348 in HCT-116 tumours

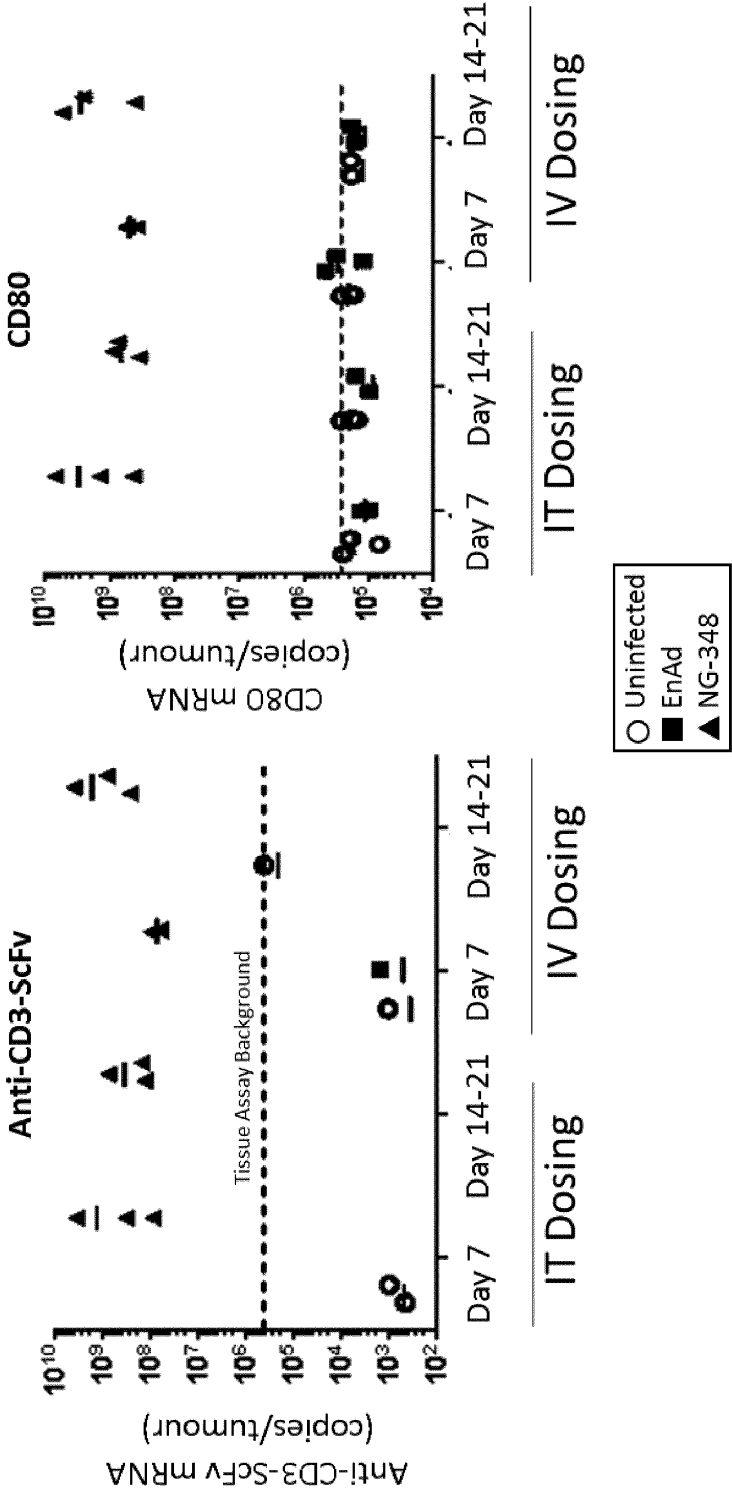


Figure 39

MIP1 α and IFN α transgene mRNA expression by NG-347 in HCT-116 tumours

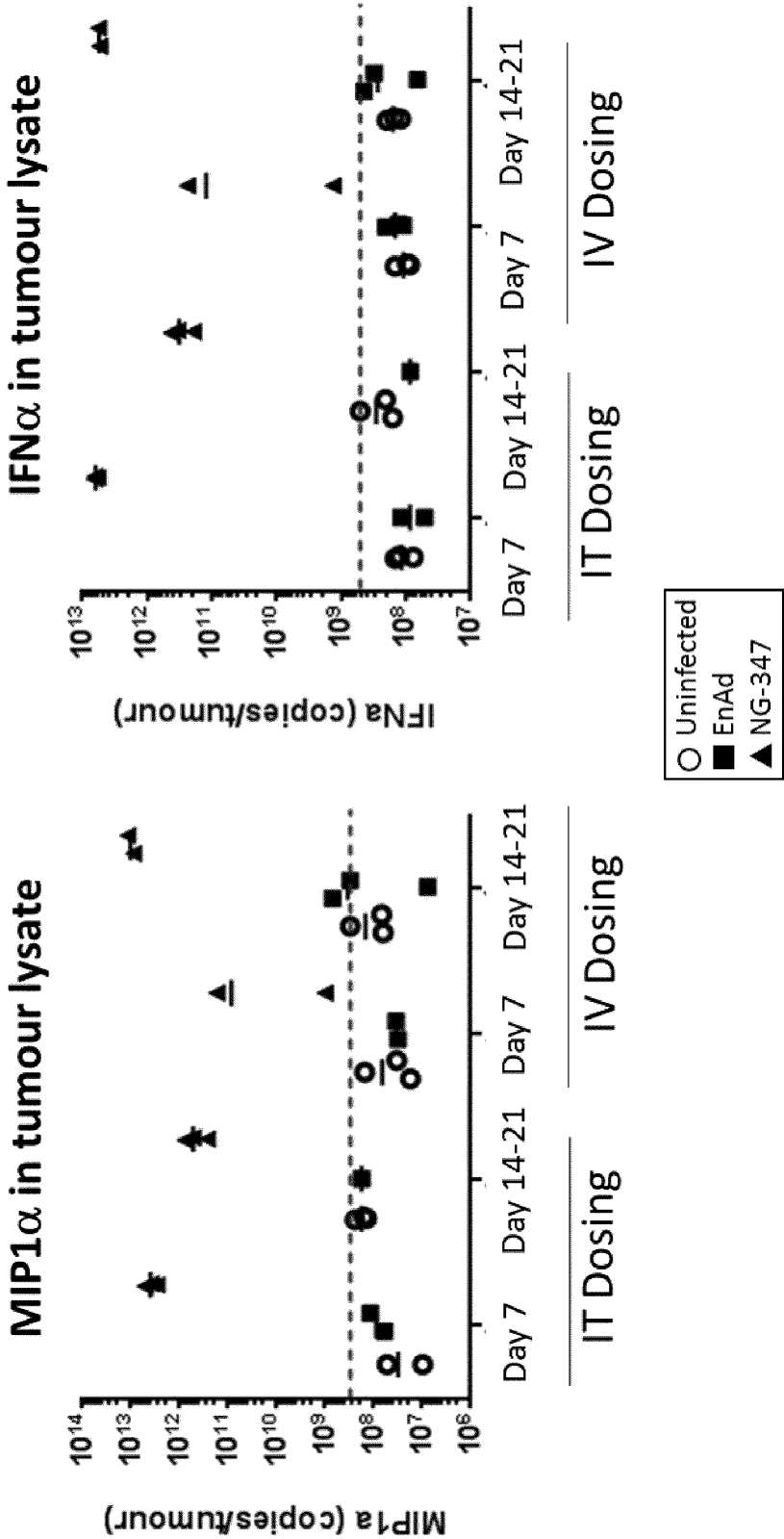


Figure 40

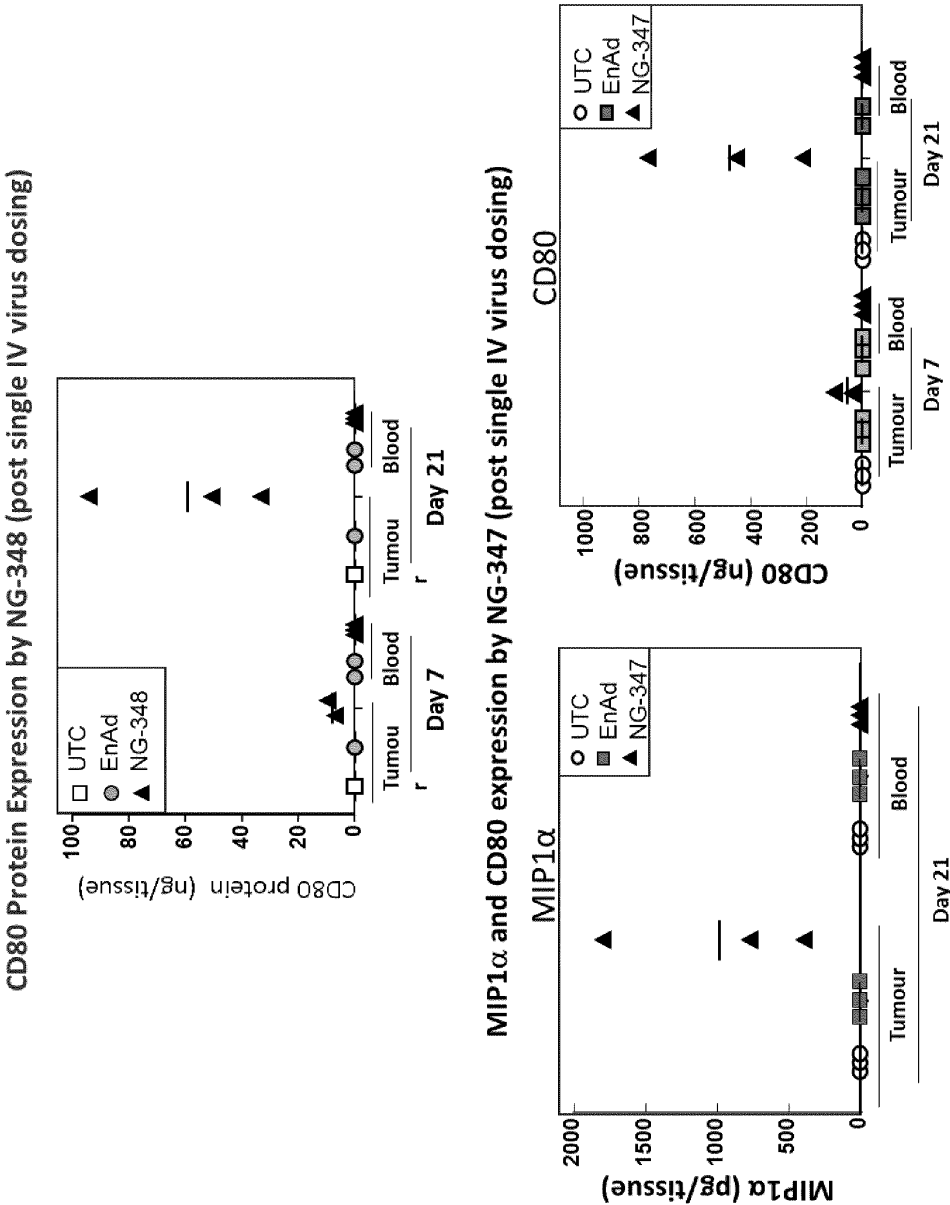


Figure 41

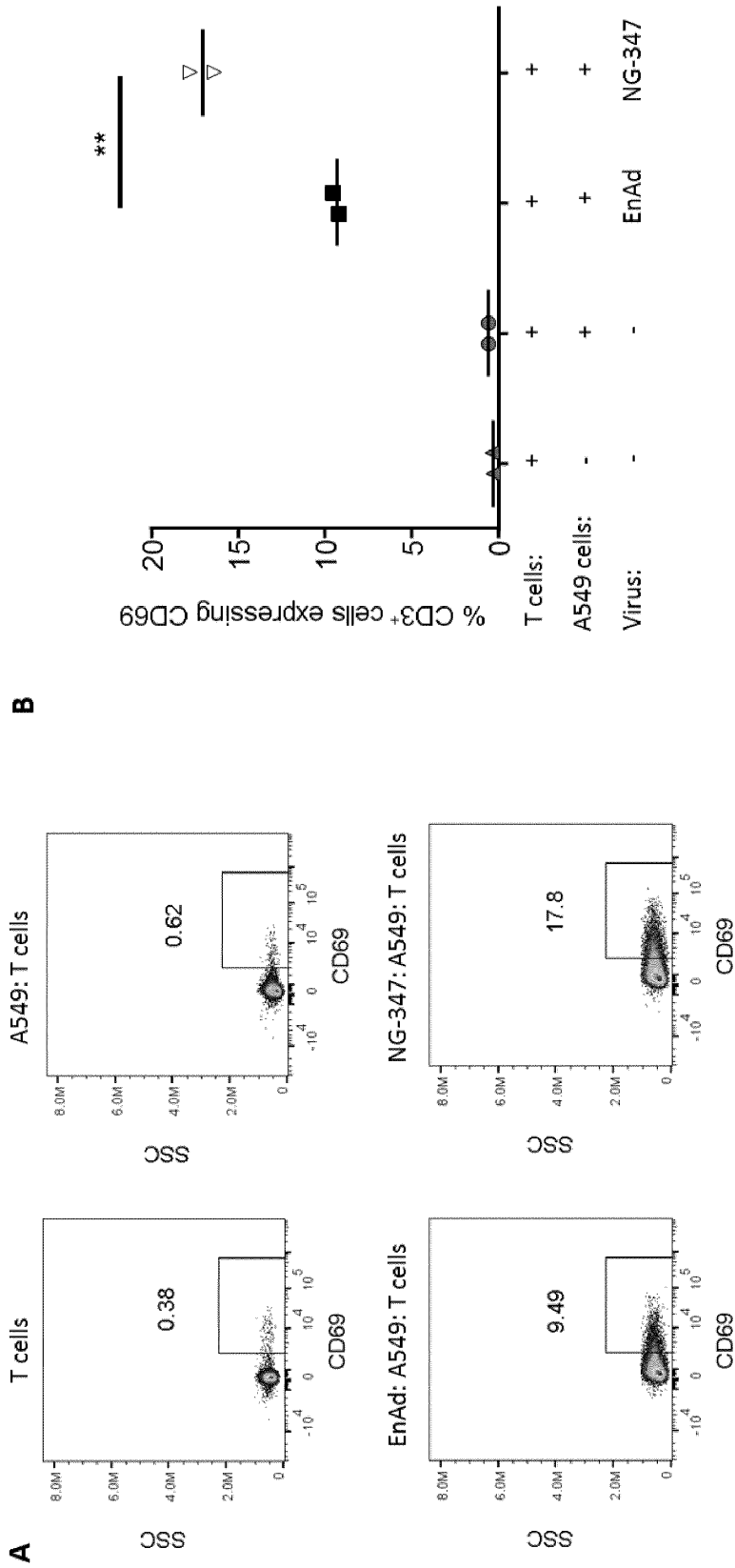
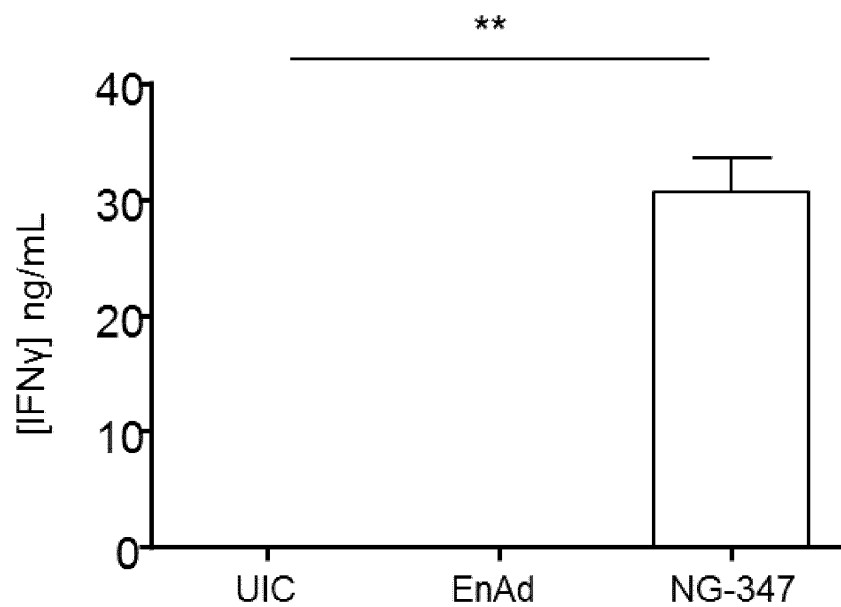


Figure 42



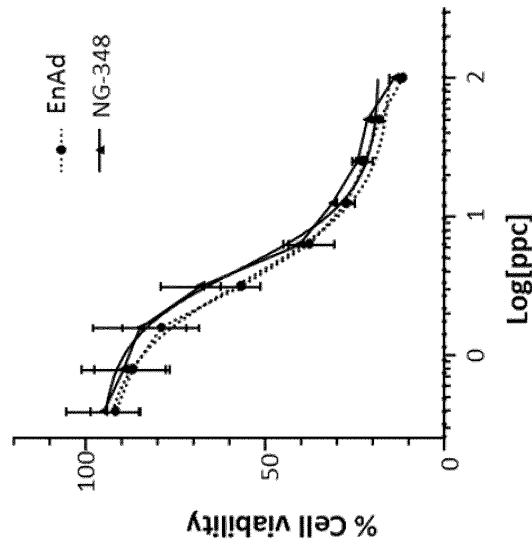


Figure 43

VIRUS	TITRE (vp/mL)	INFECTIOUS TITRE (IFU/mL)	Infectivity Ratio (P:I)
EnAd (Ref 1)	3e12	7.83e10	38.3
EnAd (Ref 2)	3e12	9.37e10	32.0
NG-348	6.68e12	3.31e11	20.2

Figure 44

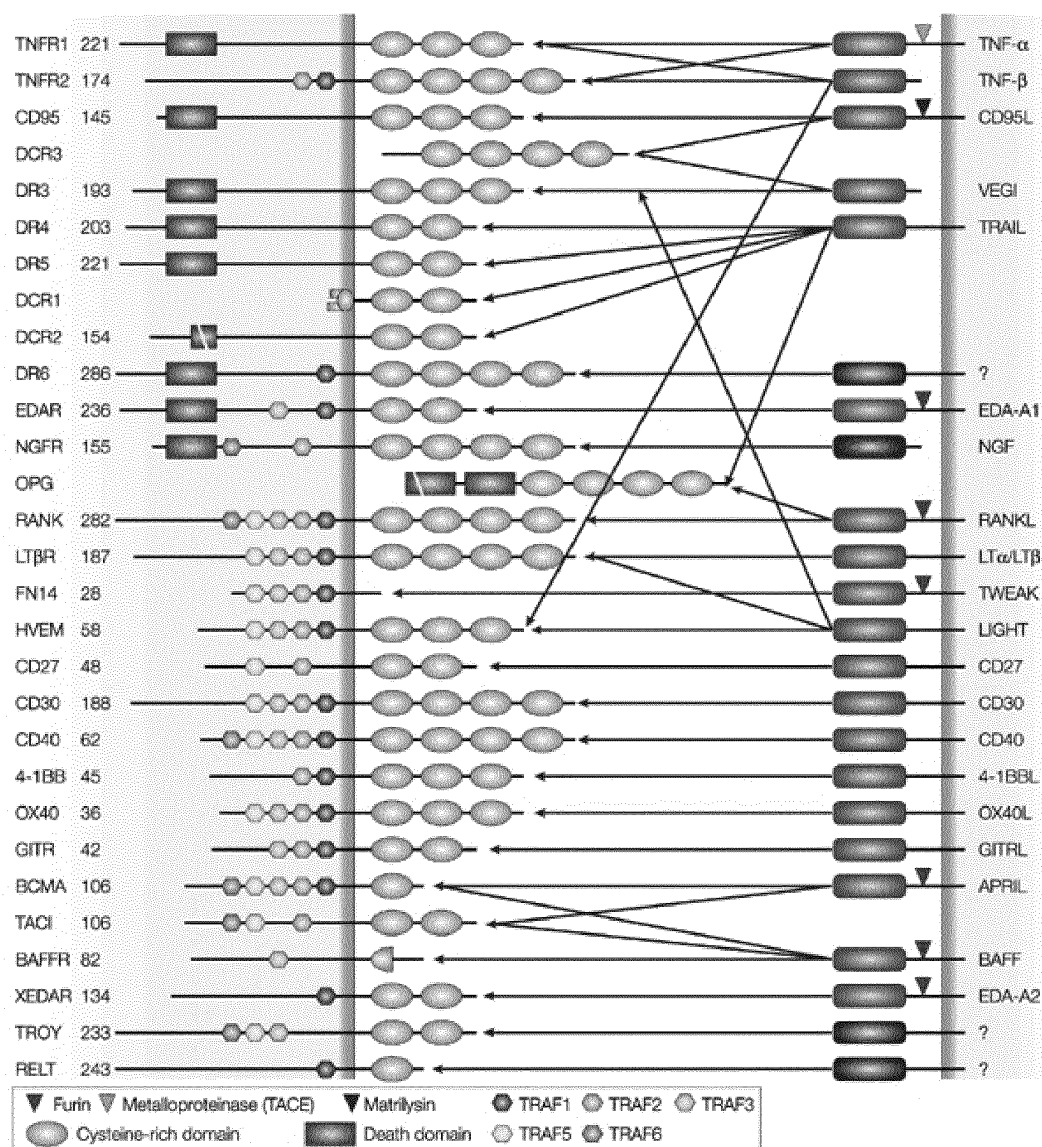


Figure 45**SEQ ID NO: 1 Muromonab-CD3 (OKT3) VH**

QVQLQQSGAELARPGASVKMSCKASGYTFTRYTMHWVKQRPQGQLEWIGYINPSRGYTNYNQKFQDKAT
LTDDKSSSTAYMQLSSLTSEDSAVYYCARYYDDHYCLDYWGQGTTLTVSS

SEQ ID NO: 2 Muromonab-CD3 (OKT3) VL

DIVLTQSPAIMASASPGEKVTMTCSASSSVSYMNWYQQKSGTSPKRWIYDTSKLGSGVPAHFRGSGSGTS
YSLTISGMEAEDAATYYCQQWSSNPFTFGSGTKLEINR

SEQ ID NO: 3 Muromonab-CD3 (OKT3) single chain Fv

QVQLQQSGAELARPGASVKMSCKASGYTFTRYTMHWVKQRPQGQLEWIGYINPSRGYTNYNQKFQDKAT
LTDDKSSSTAYMQLSSLTSEDSAVYYCARYYDDHYCLDYWGQGTTLTVSSGGGGSGGGSGGGGSDIVL
TQSPAIMASASPGEKVTMTCSASSSVSYMNWYQQKSGTSPKRWIYDTSKLGSGVPAHFRGSGSGTSYSLT
ISGMEAEDAATYYCQQWSSNPFTFGSGTKLEINR

SEQ ID NO: 4 Membrane anchored form of the anti-human CD3 single chain Fv

MGWSCIIILFLVATATGVHSQVQLQQSGAELARPGASVKMSCKASGYTFTRYTMHWVKQRPQGQLEWIGY
INPSRGYTNYNQKFQDKATLTDDKSSSTAYMQLSSLTSEDSAVYYCARYYDDHYCLDYWGQGTTLTVSS
GGGGSGGGSGGGGSDIVLTQSPAIMASASPGEKVTMTCSASSSVSYMNWYQQKSGTSPKRWIYDTSKLA
SGVPAHFRGSGSGTSYSLTISGMEAEDAATYYCQQWSSNPFTFGSGTKLEINRGSEQKLISEEDLNAV
GQDTQEVIVVPHSLPFGKVVVISAILALVLTIIISLIILIMLWQKKPR

SEQ ID NO: 5 Membrane anchored form of anti-human CD3 single chain Fv with C-terminal V5 tag

MGWSCIIILFLVATATGVHSQVQLQQSGAELARPGASVKMSCKASGYTFTRYTMHWVKQRPQGQLEWIGY
INPSRGYTNYNQKFQDKATLTDDKSSSTAYMQLSSLTSEDSAVYYCARYYDDHYCLDYWGQGTTLTVSS
GGGGSGGGSGGGGSDIVLTQSPAIMASASPGEKVTMTCSASSSVSYMNWYQQKSGTSPKRWIYDTSKLA
SGVPAHFRGSGSGTSYSLTISGMEAEDAATYYCQQWSSNPFTFGSGTKLEINRGSEQKLISEEDLNAV
GQDTQEVIVVPHSLPFGKVVVISAILALVLTIIISLIILIMLWQKKPRGS **IPNPLIGLD** Tag in bold

SEQ ID NO: 6 Teplizumab VH sequence

QVQLVQSGGGVVPGRSLRLSCKASGYTFTRYTMHWVRQAPGKLEWIGYINPSRGYTNYNQKVKDRFT
ISRDN SKNTAFLQMDSLRPEDTGVYFCARYYDDHYCLDYWGQGTPVTVSS

Figure 46**SEQ ID NO: 7 Teplizumab VL sequence**

DIQMTQSPSSLSASVGDRVTITCSASSSVSYMNWYQQTPGKAPKRWIYDTSKLGSGVPSRFSGSGSGTD
YTFTISSLPEDIAATYYCQQWSSNPFTFGQGTCLQITR

SEQ ID NO: 8 Teplizumab Heavy chain sequence

QVQLVQSGGGVVPGRSLRLSCKASGYTFTRYTMHWVRQAPGKLEWIGYINPSRGYTNYNQKVKDRFT
ISRDN SKNTAFLQMDSLRPEDTGVYFCARYYDDHYCLDYWGQGTPVTVSSASTKGPSVFPLAPSSKST
SGTAALGCLVKDYFPEPVTVSWNSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVNHK
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REPQVYTLPPSRDELTKNQVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPVLDSDGSFFLYSKLTV
DKSRWQQGNVFCSCVMHEALHNHYTQKSLSLSPGK

SEQ ID NO: 9 Teplizumab Light Chain Sequence

DIQMTQSPSSLSASVGDRVTITCSASSSVSYMNWYQQTPGKAPKRWIYDTSKLGSGVPSRFSGSGSGTD
YTFTISSLPEDIAATYYCQQWSSNPFTFGQGTCLQITRVAAPSVEIFPPSDEQLKSGTASVVCCLNNF
YPREAKVQWKVDNALQSGNSQESVTEQDSKSTYLSSTLTLSKADYEKHKVYACEVTHQGLSSPVTKS
FNRGEC

SEQ ID NO: 15 PDGFR TM Domain

AVGQDTQEVIVVPHSLPFGKVVVISAILALVLTIIISLIILIMLWQKKPR

SEQ ID NO: 18 PDGFR TM Domain with N-terminal c-myc tag

gsEQKLISEEDLnAVGQDTQEVIVVPHSLPFGKVVVISAILALVLTIIISLIILIMLWQKKPR

Figure 47**SEQ ID NO: 19 HuVH human VH leader sequence**

MGWSCIILFLVATATGVHS

SEQ ID NO: 21 EnAd Genome

TCTATCTATATAATATACCTTATAGATGGAATGGTGCCAATATGTAAATGAGGTGATTTTAAAAAGTGT
GGATCGTGTGGTGATTGGCTGTGGGGTTAACGGCTAAAAGGGGCGGTGCGACCGTGGGAAAATGACGTT
TTGTGGGGGTGGAGTTTTTTTGTCAAGTTGTCGCGGGAAATGTGACGCATAAAAAGGCTTTTTTCTCACG
GAACTACTTAGTTTTCCACGGTATTTAACAGGAAATGAGGTAGTTTTGACCGGATGCAAGTGAAAATT
GTTGATTTTCGCGCGAAAACCTGAATGAGGAAGTGTCTTCTGAATAATGTGGTATTTATGGCAGGGTGG
AGTATTTGTTTCAGGGCCAGGTAGACTTTGACCCATTACGTGGAGGTTTCGATTACCGTGTTTTTACCT
GAATTTCCGCGTACCGTGTCAAAGTCTTCTGTTTTTACGTAGGTGTCAGCTGATCGCTAGGGTATTTAT
ACCTCAGGGTTTGTGTCAAGAGGCCACTCTTGAGTGCCAGCGAGAAGAGTTTTCTCCTCTGCGCCGGCA
GTTTAATAATAAAAAAATGAGAGATTTGCGATTTCTGCCTCAGGAAAATACTCTGCTGAGACTGGAAA
TGAAATATTGGAGCTTGTGGTGCACGCCCTGATGGGAGACGATCCGGAGCCACCTGTGCAGCTTTTTGA
GCCTCCTACGCTTCAGGAACCTGTATGATTTAGAGGTAGAGGGATCGGAGGATTCTAATGAGGAAGCTGT
AAATGGCTTTTTTACCGATTCTATGCTTTTAGCTGCTAATGAAGGGTTAGAATTAGATCCGCCTTTGGA
CACTTTTGATACTCCAGGGGTAATTGTGGAAGCGGTACAGGTGTAAGAAAATTACCTGATTTGAGTTC
CGTGGACTGTGATTTGCACTGCTATGAAGACGGGTTTCTCCGAGTGATGAGGAGGACCATGAAAAGGA
GCAGTCCATGCAGACTGCAGCGGGTGAGGGAGTGAAGGCTGCCAATGTTGGTTTTTCAGTTGGATTGCC
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ATGTTTCGCTTTGTTATATGAGAAGCAGTCCACTTTTATTTACAGTAAGTGTGTTTAAGTTAAATTTA
AAGGAATATGCTGTTTTTACATGTATATTGAGTGTGAGTTTTGTGCTTCTTATTATAGGTCCTGTGTC
TGATGCTGATGAATCACCATCTCCTGATTCTACTACCTCACCTCCTGAGATTCAAGACCTGTTTCTGT
GGACGTGCGCAAGCCCATTCTGTGAAGCTTAAGCCTGGGAAACGTCCAGCAGTGGA AAAA ACTTGAGGA
CTTGTTACAGGGTGGGGACGGACCTTTGGACTTGAGTACACGGAACGTCCAAGACAATAAGTGTTC
TATCCGTGTTTTACTTAAGGTGACGTCAATATTTGTGTGACAGTGCAATGTAATAAAAAATATGTTAACTG
TTCACTGGTTTTTTATTGCTTTTTTGGGCGGGGACTCAGGTATATAAGTAGAAGCAGACCTGTGTGGTTAG
CTCATAGGAGCTGGCTTTTCATCCATGGAGGTTTGGGCCATTTTGGAAAGACCTTAGGAAGACTAGGCAAC
TGTTAGAGAACGCTTCGGACGGAGTCTCCGTTTTTGGAGATTCTGGTTCGCTAGTGAATTAGCTAGGG
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TGTTAAGTTTAGGGGAGATGGTTATAATGGAATAGTGTATGGCCAATACCAAACCTTATATTGCATGG
TTGTAGCTTTTTTGGTTTTCAACAATACCTGTGTAGATGCCTGGGGACAGGTTAGTGTACGGGGATGTAG
TTTCTATGCGTGTTGGATTGCCACAGCTGGCAGAACCAAGAGTCAATTGTCTCTGAAGAAATGCATATT
TCAAAGATGTAACCTGGGCATTCTGAATGAAGGCGAAGCAAGGGTCCGCCACTGCGCTTCTACAGATAC
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GCCGTAAACCCACAGCCAATCACCACACGATCCACACTTTTTTAAATCACCTCATTTACATATTGGCA
CCATTCCATCTATAAGGTATATTATATAGATAGA

Figure 48**SEQ ID NO: 87 DNA CORRESPONDING TO E2B REGION OF THE ENAD GENOME (BP 10355-5068)**

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AACTCCTCTTCCAGAAGACGGATAAGTTTCGGCGATGGTGGTGGCGACCTCGCGCTCGAAAGCCCCCTGGG
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GGAACGCGGCGACGCCGGCGGCGCACGGGCAGACGGTCGATGAATCTTTCAATGACCTCTCCGCGGCGG
CGGCGCATGGTTTCACTGACGGCGCGGCCGTTCTCGCGCGGTGCGAGAGTAAAAACACCGCCGCGCATC
TCCTTAAAGTGGTGACTGGGAGGTTCTCCGTTTGGGAGGGAGAGGGCGCTGATTATACATTTTATTAAT
TGGCCCGTAGGGACTGCACGCAGAGATCTGATCGTGTCAAGATCCACGGGATCTGAAAACCTTTTCGACG
AAAGCGTCTAACAGTACAGTACAAGGTAGGCTGAGTACGGCTTCTTGTGGGCGGGGGTGGTTATGT
GTTCCGTCTGGGTCTTCTGTTTCTTCTTCTCATCTCGGGAAGGTGAGACGATGCTGCTGGTGATGAAATTA
AAGTAGGCAGTCTAAGACGGCGGATGGTGGCGAGGAGCACCAGGTCTTTGGGTCCGGCTTGCTGGATA
CGCAGGCGATTGGCCATTCCCCAAGCATTATCCTGACATCTAGCAAGATCTTTGTAGTAGTCTTGCATG
AGCCGTTCTACGGGCACTTCTTCTCACCCGTTCTGCCATGCATACGTGTGAGTCCAAATCCGCGCATT
GGTTGTACCAGTGCCAAGTCAGCTACGACTCTTTCGGCGAGGATGGCTTGCTGTACTTGGGTAAGGGTG
GCTTGAAAGTCATCAAAATCCACAAAGCGGTGGTAAGCTCCTGTATTAATGGTGTAAGCACAGTTGGCC
ATGACTGACCAGTTAACTGTCTGGTGACCAGGGCGCACGAGCTCGGTGTATTTAAGGCGCGAATAGGCG
CGGGTGTCAAAGATGTAATCGTTGACAGGTGCGCACCAGATACTGGTACCCTATAAGAAAATGCGGCGGT
GGTTGGCGGTAGAGAGGCCATCGTTCTGTAGCTGGAGCGCCAGGGGCGAGGTCTTCCAACATAAGGCGG
TGATAGCCGTAGATGTACCTGGACATCCAGGTGATTCCTGCGGCGGTAGTAGAAGCCCGAGGAAACTCG
CGTACGCGGTTCCAAATGTTGCGTAGCGGCATGAAGTAGTTCAT

SEQ ID NO: 88 A NON-CODING SEQUENCE SUITABLE FOR INCLUSION INTO BX

AAAATGATTAATAAAAAATCACTTACTTGAAATCAGCAATAAGGTCTCTGTTGAAATTTTCTCCAGCA
GCACCTCACTTCCCTCTTCCCACTCTGGTATTCTAAACCCCGTTACGCGGCATACTTTCTCCATACTT
TAAAGGGGATGTCAAATTTTAGCTCCTCTCCTGTACCCACAATCTTCATGTCTTTCTTCCAG

SEQ ID NO: 89 A NON-CODING SEQUENCE SUITABLE FOR INCLUSION INTO BY

CAAATAAAGTTTAACTTGTTTATTTGAAAATCAA

SEQ ID NO. 90 SPLICE ACCEPTOR SEQUENCE

TTTCTCTCTT CAGG

SEQ ID NO. 91 SPLICE ACCEPTOR SEQUENCE

TGCTAATCTT CCTTCTCTC TTCAGG

Figure 49**SEQ ID NO: 93** Internal Ribosome Entry Sequence (IRES)

CGTTACTGGCCGAAGCCGCTTGGAATAAGGCCGGTGTGCGTTTGTCTATATGTTATTTTCCACCATATT
 GCCGTCTTTTGGCAATGTGAGGGCCCCGAAACCTGGCCCTGTCTTCTTGACGAGCATTCCCTAGGGGTCT
 TTCCCCTCTCGCCAAAGGAATGCAAGGTCTGTTGAATGTCGTGAAGGAAGCAGTTCCTCTGGAAGCTTC
 TTGAAGACAAACAACGTCTGTAGCGACCCTTTGCAGGCAGCGGAACCCCCACCTGGCGACAGGTGCCT
 CTGCGGCCAAAAGCCACGTGTATAAGATACACCTGCAAAGGCGGCACAACCCACGTGCCACGTTGTGAG
 TTGGATAGTTGTGGAAAGAGTCAAATGGCTCCCCTCAAGCGTATTCAACAAGGGGCTGAAGGATGCCCA
 GAAGGTACCCATTGTATGGGATCTGATCTGGGGCCTCGGTGCACATGCTTTTCATGTGTTTAGTCGAG
 GTTAAAAAACGTCTAGGCCCCCGAACCACGGGACGTGGTTTTCCCTTTGAAAAACACGATGATAATA

SEQ ID NO: 94 High efficiency self-cleavable P2A peptide sequence

GSGATNFSLLKQAGDVEENPGP

SEQ ID NO: 95 High efficiency self-cleavable F2A peptide sequence

GSGEGRGSLLTCDGVEENPGP

SEQ ID NO: 96 High efficiency self-cleavable E2A peptide sequence

GSGQCTNYALLKLAGDVESNPGP

SEQ ID NO: 97 High efficiency self-cleavable T2A peptide sequence

GSGVKQTLNFDLLKLAGDVESNPGP

SEQ ID NO: 98 Human CD80 amino acid sequence

MGHTRRQGTSPSKCPYLNFFQLLVLAGLSHFCSGVIHVTKEVKEVATLSCGHNVSVEELAQTIRIYWQKE
 KKMVLTMMSGDMNIWPEYKNRTIFDITNNLSIVILALRPSDEGTYESCVVLKYEKDAFKREHLAEVTLVS
 KADFPTPSISDFEIPSTNIRRIICSTSGGFPEPHLSWLENGEELNAINTTVSQDPETELYAVSSKLDNFN
 MTTNHSFMCLIKYGHRLVNQTFNWNNTTKQEHFPDNLPSWAITLISVNGIFVICCLTYCFAPRCRERRR
 NERLRRESVRPV

SEQ ID NO: 99 poly adenylation sequence (SV40 late polyA sequence)

CAGACATGATAAGATACATTGATGAGTTTGGACAAACCACAACCTAGAAATGCAGTGAAAAAATGCTTTA
 TTTGTGAAATTTGTGATGCTATTGCTTTATTTGTAACCATTATAAGCTGCAATAAACAGTTAACAACA
 ACAATTGCATTCAATTTATGTTTCAGGTTTCAGGGGGAGGTGTGGGAGGTTTTTT

SEQ ID NO: 100**Figure 50**

NG-348 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3 ϵ and the T lymphocyte activation antigen, CD80 inserted in the region B γ . The transgene cassette contains a 5' SSA, membrane-anchored anti-CD3 ϵ cDNA sequence, P2A peptide, human CD80 cDNA sequence and a 3' poly(A) sequence

TCTATCTATATAATATACCTTATAGATGGAATGGTGCCAATATGTAAATGAGGTGATTTTAAAAAGTGT
 GGATCGTGTGGTGATTGGCTGTGGGGTTAACGGCTAAAAGGGGCGGTGCGACCGTGGGAAAATGACGTT
 TTGTGGGGGTGGAGTTTTTTTGCAAGTTGTCGCGGGAAATGTGACGCATAAAAAGGCTTTTTTCTCACG
 GAACTACTTAGTTTTCCACGGTATTTAACAGGAAATGAGGTAGTTTTGACCGGATGCAAGTGAAAATT
 GTTGATTTTCGCGCGAAAACCTGAATGAGGAAGTGTCTTCTGAATAATGTGGTATTTATGGCAGGGTGG
 AGTATTTGTTTCAGGGCCAGGTAGACTTTGACCCATTACGTGGAGGTTTCGATTACCGTGTTTTTTACCT
 GAATTTCCGCGTACCGTGTCAAAGTCTTCTGTTTTTACGTAGGTGTCAGCTGATCGCTAGGGTATTTAT
 ACCTCAGGGTTTGTGTCAAGAGGCCACTCTTGAGTGCCAGCGAGAAGAGTTTTCTCCTCTGCGCCGGCA
 GTTTAATAATAAAAAAATGAGAGATTTGCGATTTCTGCCTCAGGAAATAATCTCTGCTGAGACTGGAAA
 TGAAATATTGGAGCTTGTGGTGCACGCCCTGATGGGAGACGATCCGGAGCCACCTGTGCAGCTTTTTGA
 GCCTCTACGCTTCAGGAAGTGTATGATTTAGAGGTAGAGGGATCGGAGGATTCTAATGAGGAAGCTGT
 AAATGGCTTTTTTACCGATTCTATGCTTTTAGCTGCTAATGAAGGGTTAGAATTAGATCCGCCTTTGGA

CACTTTTGATACTCCAGGGGTAATTGTGGAAAGCGGTACAGGTGTAAGAAAAATTACCTGATTTGAGTTC
CGTGGACTGTGATTTGCACTGCTATGAAGACGGGTTTCCTCCGAGTGATGAGGAGGACCATGAAAAGGA
GCAGTCCATGCAGACTGCAGCGGGTGAGGGAGTGAAGGCTGCCAATGTTGGTTTTTCAGTTGGATTGCCC
GGAGCTTCCTGGACATGGCTGTAAGTCTTGTGAATTTACAGGAAAAATACTGGAGTAAAGGAACTGTT
ATGTTTCGCTTTGTTATATGAGAACGCACTGCCACTTTATTTACAGTAAAGTGTGTTAAGTTAAATTTA
AAGGAATATGCTGTTTTTACATGTATATTGAGTGTGAGTTTTGTGCTTCTTATTATAGGTCCTGTGTC
TGATGCTGATGAATCACCATCTCCTGATTCTACTACCTCACCTCCTGAGATTCAAGCACCTGTTCTGT
GGACGTGCGCAAGCCCATTCTGTGAAGCTTAAGCCTGGGAAACGTCCAGCAGTGGA AAAA ACTTGAGGA
CTTGTTACAGGGTGGGGACGGACCTTTGGACTTGAGTACACGGAAACGTCCAAGACAATAAGTGTTC
TATCCGTGTTTTACTTAAGGTGACGTCAATATTTGTGTGACAGTGCAATGTAATAAAAAATATGTTAACTG
TTCCTGTTTTTATTGCTTTTTGGGCGGGGACTCAGGTATATAAGTAGAAGCAGACCTGTGTGGTTAG
CTCATAGGAGCTGGCTTTTCATCCATGGAGGTTTGGGCCATTTTGGAAAGACCTTAGGAAGACTAGGCAAC
TGTTAGAGAACGCTTCGGACGGAGTCTCCGGTTTTTGGAGATTCTGGTTCGCTAGTGAATTAGCTAGGG
TAGTTTTTAGGATAAAAACAGGACTATAAACAAGAATTTGAAAAGTTGTTGGTAGATTGCCAGGACTTT
TTGAAGCTCTTAATTTGGGCCATCAGGTTCACTTTAAAGAAAAAGTTTTATCAGTTTTAGACTTTTCAA
CCCCAGGTAGAACTGCTGCTGCTGTGGCTTTTTCTACTTTTATATTAGATAAATGGATCCCGCAGACTC
ATTTACAGAGGGGATACGTTTTGGATTTTCATAGCCACAGCATTGTGGAGAACATGGAAGGTTTCGAAGA
TGAGGACAATCTTAGGTTACTGGCCAGTGCAGCCTTTGGGTGTAGCGGGAATCCTGAGGCATCCACCGG
TCATGCCAGCGGTTCTGGAGGAGGAACAGCAAGAGGACAACCCGAGAGCCGGCCTGGACCCTCCAGTGG
AGGAGGCGGAGTAGCTGACTTGTCTCCTGAACGCAACGGGTGCTTACTGGATCTACGTCCACTGGACG
GGATAGGGGCGTTAAGAGGGAGAGGGCATCTAGTGGTACTGATGCTAGATCTGAGTTGGCTTTAAGTTT
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TGTAATTCAGGAGAAATATTCACTGGAACAGGTGAAAACATGTTGGTTGGAGCCTGAGGATGATTGGGA
GGTGCCATTAAAAATTATGCCAAGATAGCTTTGAGGCCTGATAAACAGTATAAGATTACTAGACGGAT
TAATATCCGGAATGCTTGTTACATATCTGGAATGGGGCTGAGGTGGTAATAGATACTCAAGACAAGGC
AGTTATTAGATGCTGCATGATGGATATGTGGCCTGGGGTAGTCGGTATGGAAGCAGTAACTTTTGTA
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AGCCCTTATCTGACAGGGCGTCTCCCATCTGGGCAGGAGTTCGTCAGAATGTTATGGGATCTACTGTG
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CAAATGAGTCTGCTGTGCGGCACGGCAAAGTCTAAATAAAAAAATCCAGAATCAATGAATAAATAAAC
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TGGAAGAGGTAGTTGAGTGTGGTGGCGATGTGCTCGGTGACGAAGAAATACATGATCCATCGTCTCAGC
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AAAACTGGGAGTTTCGCGCGGACACGGTCAACTCCTCTTCCAGAAGACGATAAGTTTCGGCGATGGTG
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GGTCGACAGATAAAACACCGCCGCGCATCTCCTTAAAGTGGTGAAGTGGGAGGTTCTCCGTTTGGGAGG
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GGCTCGCTACAACAGTAGCAATGTGCAAACCAATTTGGACCGTATGATAACAGATGTACGCGAAGCCGT
GTCTCAGCGCGAAAGGTTCCAGCGTGATGCCAACCTGGGTTTCGCTGGTGGCGTTAAATGCTTTCTTGAG
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GGTATCAGAAGTACCTCAGAGCGAAGTGTATCAGTCCGGTCTGATTACTTCTTTAGACTAGCAGACA
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ACAGCCAATCACCACACGATCCACACTTTTTAAATCACCTCATTACATATTGGCACCATTCCATCTA
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SEQ ID NO: 101 V5 TAG

IPNPLGLD

Figure 51

SEQUENCE ID NO. 102 NG-348A virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e with C-terminal V5 tag and the T lymphocyte activation antigen, CD80 inserted in the region By. The transgene cassette contains a 5' SSA, membrane-anchored anti-CD3E cDNA sequence, V5 tag, P2A peptide, human CD80 cDNA sequence and a 3' poly(A) sequence

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CACAGGAGATGCCCCAGAGGTGCAAACCTCTGCTACAACCCTAGTCACCTCCCCATTTACCTTTTACTA
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CCTCTTCTTGGTAGCAACAGCTACAGGTGTCCACTCCCAGGTGCAGCTGCAGCAGTCTGGGGCTGAAC
GGCAAGACCTGGGGCCTCAGTGAAGATGTCTGCAAGGCTTCTGGCTACACCTTTACTAGGTACACGAT
GCACTGGGTAAAACAGAGGCCTGGACAGGGTCTGGAATGGATTGGATACATTAATCCTAGCCGTGGTTA
TACTAATTACAATCAGAAGTTCAAGGACAAGGCCACATTGACTACAGACAAATCCTCCAGCACAGCCTA
CATGCAACTGAGCAGCCTGACATCTGAGGACTCTGCAGTCTATTACTGTGCAAGATATTATGATGATCA
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ACGGTGCACCGCCCTTTTAGCCGTTAACCCACAGCCAATCACCACACGATCCACACTTTTTAAAT
CACCTCATTTACATATTGGCACCATTCCATCTATAAGGTATATTATATAGATAGA

Figure 52

SEQ ID NO. 103 NG-420 virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e inserted in the region B_y. The transgene cassette contains a 5' SSA, membrane-anchored anti-CD3E cDNA sequence and a 3' poly(A) sequence

TCTATCTATATAATATACCTTATAGATGGAATGGTGCCAATATGTAAATGAGGTGATTTTAAAAAGTGT
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TAAATCACCTCATTTACATATTGGCACCATTCCATCTATAAGGTATATTATATAGATAGA

Figure 53

SEQ ID NO. 104 NG-420A virus genome sequence comprising the EnAd genome with a transgene cassette that encodes a membrane-anchored chimeric form of the single chain Fv anti-human CD3e and a C-terminal V5 tag, inserted in the region By. The transgene cassette contains a 5' SSA, membrane-anchored anti-CD3E cDNA sequence, V5 tag sequence and a 3' poly(A) sequence.

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