SEQ ID NO. 87; Nanobody (VHH) CD14 3RMB1-2-15
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVE**MGWYRQAPGKGRELVAE**LSDGV**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**TADLTGSSWSPYRYLEV**
WGQGTQVTVSS

SEQ ID NO. 88; Nanobody (VHH) CD14 3RMB1-2-16
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSI**VDMGWYRQAPGKGRELVAE**LSDG**
SCNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSLWSPYRYL**
EVWGQGTQVTVSS

SEQ ID NO. 89; Nanobody (VHH) CD14 3RMB1-2-20
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSMVD**MGWYRQAPGKGRELVAE**LSLG**
STNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWEPYRYLE**
VWGQGTQVTVSS

SEQ ID NO. 90; Nanobody (VHH) CD14 3RMB1-1-16
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSILD**MGWYRQAPGKGRELVAE**LSDGS**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSEYRYLEV**
WGQGTQVTVSS

SEQ ID NO. 91; Nanobody (VHH) CD14 3RMB1-1-28
QVQLQESGGGLVQSGGSLRLSCAVS**GSLFSIV**DMGWYRQAPGKGRELVAE**LSDG**
PTNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSLYRYLE**
HWGQGTQVTVSS

SEQ ID NO. 92; Nanobody (VHH) CD14 3RMB1-1-9
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSDG**
CTNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NIDLTGSSWSPYRYLE**
VWGQGTQVTVSS

SEQ ID NO. 93; Nanobody (VHH) CD14 3RMB1-1-27
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSGG**
STNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYL**
EVWGQGTQVTVSS

SEQ ID NO. 94; Nanobody (VHH) CD14 3RMB1-1-13
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSDGA**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSYSPYRYLEV**
WGQGTQVTVSS

SEQ ID NO. 95; Nanobody (VHH) CD14 3RMB1-1-5
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSDSS**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYLEV**
WGQGTQVTVSS

SEQ ID NO. 96; Nanobody (VHH) CD14 3RMB1-1-6

QVQLQESGGGLVQSGGSLRLSCSVS**GSFFSIVD**MGWYRQAPGKGRELVAE**LSDG**
STNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYLE**
VWGQGTQVTVSS

SEQ ID NO. 97; Nanobody (VHH) CD14 3RMB1-1-24
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LYDGS**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSYWSPYRYLEV**
WGQGTQVTVSS

SEQ ID NO. 98; Nanobody (VHH) CD14 3RMB1-1-2
QVQLQESGGGLVQSGGSLRLSCAVS**GSSFSIVD**MGWYRQAPGKGRELVAE**ISDG**
STNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYL**
EVWGQGTQVTVSS

SEQ ID NO. 99; Nanobody (VHH) CD14 3RMB1-1-4
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSDA**
STNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**YADLTGSSWSPYRYL**
EVWGQGTQVTVSS

SEQ ID NO. 100; Nanobody (VHH) CD14 3RMB1-1-29
QVQLQESGGGLVQSGGSLRLSCAVS**GSLFSIVD**MGWYRQAPGKGRELVAE**LSDG**
LTNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYLE**
VWGQGTQVTVSS

SEQ ID NO. 101; Nanobody (VHH) CD14 3RMB32
QVQLQESGGGLVQPGGSLRLSCAAS**GSIFSTNA**MSWYRQAPGKERELVAE**ITSGG**
STNYADSVKGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYLE**
VWGQGTQVTVSS

SEQ ID NO. 102; Nanobody (VHH) CD14 3RMB25
QVQLQESGGGLVQPGGSLRLSCSAS**ESVKSINV**MGWYRQAPGKERESVAA**ISAEG**
RTNYTDSVKGRFTISRDKGKDTVYLQMNDLKPEDTAVYYC**HADRILYKTDLYYVKN**
DVWGQGTQVTVSS

SEQ ID NO. 103; Nanobody (VHH) CD14 3RMB71
QVQLQESGGGLVQLGGSLRLSCSAS**ESVKSINV**MGWYRQAPGKERESVAA**ISAEG**
RTNYTDSVKGRFTISRDKGKDTVYLQMNDLKPEDTAVYYC**HADRILYKTDLYYVKN**
DVWGQGTQVTVSS

SEQ ID NO. 104; Nanobody (VHH) CD14 3RMB142
QVQLQESGGGLVQAGESLTLSCQPS**ERISRIDV**LGWYRQAPDKDRELVAL**SGKGG**
RTYYADSVKDRFTISRDTANNRLYLQMNKLEVDDTAIYYC**VTEAEGGGYT**SGQGTQ
VTVSS

SEQ ID NO. 105; Nanobody (VHH) CD14 3RMB62
QVQLQESGGGLVQAGDSLTISCAAS**GAASTFTL**MAWYRQAPGKQRKLVGS**ITGSG**
RTAYAQSLKDRFTISRTDAKDTMYLQMNNLKPEDTAVYYC**NAISTNGGTMEDY**WG
QGTQVTVSS

SEQ ID NO. 106; Nanobody (VHH) CD14 3RMB107
QVQLQESGGGLVQSGGSLRLSCTVT**GRIPARYS**LGWYRQLPGKEREFVAA**INWNG DNT**YYENSVKGRFTISRDNTKNTVDLQMRSLRVEDTAVYYC**AASGHSDYIDNGFGT**FGQGTQVTVSS

SEQ ID NO. 107; Nanobody (VHH) CD14 3RMB126
QVQLQESGGGLVQPGGSLRLSCAAS**GRTFSIYA**MGWFRQAPGKEHDFVAA**ISWS GGNT**YYADSVKGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**AATTHIPYSDYDAD EYDY**WGQGTQVTVSS

SEQ ID NO. 108; Nanobody (VHH) CD14 3RMB76
QVQLQESGGGSVQAGGSLRLSCTTS**RPISSIYA**MGWFRQAPGTERESVAA**INWSS GNG**YYADSVKGRFTISRDNAKKTVYLQMNNLKSEDTAVYYC**AAARQATGWSILTAA AHEY**WGQGTQVTVSS

SEQ ID NO. 109; Nanobody (VHH) CD14 3RMB134
QVQLQESGGGLVQAGGSLRLSCAAS**GRTFSSYA**MGWFRQAPGKERAFVAA**ISWS GGNT**DYADSVKGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**AADRRDLYGSRWY AAGWYDY**WGQGTQVTVSS

SEQ ID NO. 110; Nanobody (VHH) CD14 3RMB50
QVQLQESGGGLVAPGGSLRLSCVAA**GSRFGFDYY**AIGWFRQALGRQREMVSC**ISG SGRGS**NYADSVKGRFTISRDNAKNTVYLQMESLKPEDTDVYYC**GAVYSPVYSDLA LCRLDSIST**WGQGTQVTVSS

SEQ ID NO. 111; Nanobody (VHH) CD14 3RMB18
QVQLQESGGGLVQSGDSLKLSCHDP**GAIIVGQT**VAWFRQVPGKEREGIAC**ITWDS NWK**NYADSVKDRFTISRDNSKKEIYLQMDSLKPEDTAVYYC**AGDEYLNYCDSPRAF QRGTYDY**WGQGTQVTVSS

SEQ ID NO. 112; Nanobody (VHH) CD14 3EBT162
QVQLQESGGGLVQTGGSLRLSCTAS**GQTFSDNT**MAWWRQAPGKQREMVAI**ITRN NKT**TYGDSVKGRFTISRDIPKNMVFLQMNNLNSEDTGVYYC**NAGFVY**WGQGTQVT VSS

SEQ ID NO. 113; Nanobody (VHH) CD14 2EBT91
QVQLQESGGGSVQAGGSLRLSCVAS**GASSFIA**LGWYRQVPGKLRELVAR**IVDTGSI** NYADHVKGRFTISRDNAKNALYLEMNSLKPEDTAIYYC**KMNTKYDVY**WGQGTQVT VSS

SEQ ID NO. 114; Nanobody (VHH) CD14 2EBT9
QVQLQESGGGSVQPGGSLRLSCSRS**GPIYSVDT**MGWYRRAPGEQRELVAS**ITVG GTT**TYADSVKGRFTISRDNTMNTVYLQMNNLKIEDTDVYYC**NLNRRLAKSEDY**WG RGTQVTVSS

SEQ ID NO. 115; Nanobody (VHH) CD14 2EBT95
QVQLQESGGGLVQAGGSLRLSCTVS**GASFTFNA**MGWYRQAPGKQRELVAR**ITKS GTI**DYADSVKGRFTISGDSHNNAVYLKMNTLELDDTGVYYC**YARLYYMHSWFDV**YG KGTQVTVSS

SEQ ID NO. 116; Nanobody (VHH) CD14 3EBT10
QVQLQESGGGLVQSGESLRLSCTTS**GDIFGVTG**VGWYRQAPGKQRELVAA**LSNE GYT**NYKDPVKGRFTISRDNNKTAVYLQMNDLKPEDTAVYYC**KVHCTSSGCQFVGH QSFDY**WGQGTQVTVSS

SEQ ID NO. 117; Nanobody (VHH) CCR2 3RNA74
QVQLQESGGGLVQTGGSLRLSCAAS**GRTFSNYA**MGWFRQAPGKGRAFIGG**ISRS GGNT**HFADSVMGRFTISRDNAKNTVYLQMNSLTPEDTAVYYC**AAQYQWTEAVPLG NYNI**WGQGTQVTVSS

SEQ ID NO. 118; Nanobody (VHH) CCR2 2RRNA31
QVQLQESGGGLVQPGGSLRLSCAAS**GSSTSINA**MGWYRQAPGKERELVAR**ITGSG ST**SYSDSVKGRFTISRDNAKNTVYLQMNSLKAEDTAVYYC**GASRFRVGSQRTEYG Y**WGQGTQVTVSS

SEQ ID NO. 119; Nanobody (VHH) CCR2 3RSTM31
QVQLQESGGGLAQPGGSLRLSCTSS**ISIFRLNS**MGWYRQTPGKERELVAT**ITNGGT V**NYADSVKGRFTISRDNAKNTVYLQMNSLKSEDTAVYYC**KSWPFPQEY**WGKGTQV TVSS

SEQ ID NO. 120; Nanobody (VHH) CCR2 3RZK33
QVQLQESGGGSVQPGGSLRLSCVVS**GFTTDNYI**IAWYRQAPGKGREGVSS**ISRSD GST**YYAPSVKGRFSITSDSAKNTVSLQMNSLKPEDTAVYYC**NAHDSYGNERDY**WG QGTQVTVSS

SEQ ID NO. 121; Synthetic promoter #11: Enhancer 033 – Proximal Promoter CD3d
gggaagatgtgagacaaacatcacaattttgcctaaggtgaatccaacccacaagtagagcacaggccaacagc
agctcactagtacacatacttacaccagcagctcactagtacacacacttacaccagacgctcactggtacacactc
acaccggcattcatgcttacccacgggctggtcaacaaagaggtgctgacctgagagtagggcacataacctcagc
cactggggtacacttaccacccccgcccccgtgtagctccctcccctatcctgaaatctcccttagcacactaagtattct
aggttaaacagcccagatgttcagggagttcattcgccaggtgggaagtaatgagatgtaaatcggggtcttttaggta
atagctgacaactggggtaggaatgggggttctgagcccagtgctggctgccgggctgtttatctctgagtcacatcag
caccaagccacagcagccacctgccctagctccatctcttacagtcacaacaggatgtggtttgacatttactgggtcc
tgcatctggggtgcctgtgaaagttgctccctccacccacccaccttcagagcatcatgagaaccacactcaccgcat
ccggcacccaacccctcctatgctgctctttctacctgggcccctggttagcatcctggcagtagaaatagaatttaca
ccgcttccttcctaccctacccctagcccacccccactctgaaaatttcccaccatcaacggcagaaagcagagaag
cagacatcttctagttcctcccccactctcctctttccggtacctgtgagtcagctaggggagggcagctctcacccagg
ctgatagttcggtgacctggctttatctactggatgagttccgctgggag

SEQ ID NO. 122; Synthetic promoter #12: Enhancer 034 – Proximal Promoter CD3d
Gggaagatgtgagacaaacatcacaattttgcctaaggtgaatccaacccacaagtagagcacaggccaacagc
agctcactagtacacatacttacaccagcagctcactagtacacacacttacaccagacgctcactggtacacactc
acaccggtgggaagtaatgagatgtaaatcggggtcttttaggtaatagctgacaactggggtaggaatgggggttct
gagcccagtgctggctgccgggctgtttatctctgagtcacatcagcaccaagccacagcagccacctgccctagctc
catctcttacagtcacaacaggatgtggtttgacatttactgggtcctgcatctggggtgcctgtgaaagttgctccctcca
cccacccaccttcagagcatcatgagaaccacactcaccgcatccggcacccaacccctcctatgctgctctttcta

cctgggcccctggttagcatcctggcagtagaaatagaatttacaccgcttccttcctaccctacccctagcccacccc
cactctgaaaatttcccaccatcaacggcagaaagcagagaagcagacatcttctagttcctcccccactctcctctttc
cggtacctgtgagtcagctaggggagggcagctctcacccaggctgatagttcggtgacctggctttatctactggatg
agttccgctgggag

SEQ ID NO. 123; Synthetic promoter #13: Enhancer 035 – Proximal Promoter CD3d

ggtgggaagtaatgagatgtaaatcggggtcttttaggtaatagctgacaactggggtaggaatgggggttctgagcc
cagtgctggctgccgggctgtttatctctgagtcacatcagcaccaagccacagcagccacctgccctagctccatctc
ttacagtcacaacaggatgtggtttgacatttactgggtcctgcatctggggtgcctgtgaaagttgctccctccacccac
ccaccttcagagcatcatgagaaccacactcaccgcatccggcacccaacccctcctatgctgctctttctacctggg
cccctggttagcatcctggcagtagaaatagaagggaagatgtgagacaaacatcacaattttgcctaaggtgaatc
caacccacaagtagagcacaggccaacagcagctcactagtacacatacttacaccagcagctcactagtacaca
cacttacaccagacgctcactggtacacactcacacctttacaccgcttccttcctaccctacccctagcccaccccca
ctctgaaaatttcccaccatcaacggcagaaagcagagaagcagacatcttctagttcctcccccactctcctctttccg
gtacctgtgagtcagctaggggagggcagctctcacccaggctgatagttcggtgacctggctttatctactggatgag
ttccgctgggag

SEQ ID NO. 124; Synthetic promoter #14: Enhancer 037 – Proximal Promoter CD3d

aaataaacaaggagatagggtgtttatttttatggacaagtttcttttgtaacttgtaactcccttgaaagtcagccagagta
tgtctcaaaccaaagtcaagatagtgagcaagaagtgttgcacttatgaagggaggtgagtgagcaatgcatgtggtt
tccaaccgttaatgctagagttatcactttctgttatcaagtggcttcagctatgcaaggaaaccaaacaggggaagtttt
ctcaagcaggttgaaagcaggttccaagaaagccctttaaataaacaaggagatagggtgtttatttttatggacaagtt
tcttttgtaacttgtaactcccttgaaagtcagccagagtatgtctcaaaccaaagtcaagatagtgagcaagaagtgtt
gcacttatgaagggaggtgagtgagcaatgcatgtggtttccaaccgttaatgctagagttatcactttctgttatcaagt
ggcttcagctatgcaaggaaaccaaacaggggaagttttctcaagcaggttgaaagcaggttccaagaaagcccttt
agaaatctagctgctacggcttgcgctatggggccgacggcttctctcaaggggcttcgagatgtggcagtgtttaggtt
gtgtgtaaatgtggttgcattgtcaatagggacgctaaagttcaggccacctttccatattctctgccagctccctgctca
gagatagagcaatttacaccgcttccttcctaccctaccctagcccacccccactctgaaaatttcccaccatcaacg
gcagaaagcagagaagcagacatcttctagttcctcccccactctcctctttccggtacctgtgagtcagctaggggag
ggcagctctcacccaggctgatagttcggtgacctggctttatctactggatgagttccgctgggag

SEQ ID NO. 125; Synthetic promoter #15: Proximal Promoter CD5

Cccacccagaccctgcctcagggacgcctgtcctcagcccagccctcagctgcagccaggccttcagcctccgta
acccccgctcagggtccccacccccctgcagccctgtccctccaggatgcatggccttgtcctgtgtgggggtggccga
gagcactgccccagccctgggtaccttgggcaggaagctggcagaggccagggctgccattcaaacaggggcag
gtggttttgccaggaggaagttgacagttcaacttcaaacatgggtgacgcaggccccacactgcctgctccccgtcc
caccctccctgagcacgccaccccgccctctccctctctgagagcgagatacccggccagacaccctcacctgcg
gtgcccagctgcccaggctgaggcaagagaaggccagaaaccatgccc

SEQ ID NO. 126; Synthetic promoter #16: Proximal Promoter C8a

cctattcacgggccccagcctcctcgccgggctggaaggcgacaaccgcgaaaaggagggtgactctcctcggcg
ggggcttcgggtgacatcacatcctccaaatgcgaaatcaggctccgggccggccgaagggcgcaactttcccccc
tcggcgccccaccggctcccgcgcgcctcccctcgcgcccgagcttcgagccaagcagcgtcctggggagcgcgt
c

SEQ ID NO. 127; Synthetic promoter #17: Enhancer 023-NFAT RE – Proximal Promoter CD3d

ggcattcatgcttacccacgggctggtcaacaaagaggtgctgacctgagagtagggcacataacctcagccactg
gggtacacttaccacccccgcccccgtgtagctccctcccctatcctgaaatctcccttagcacactaagtattctaggtt
aaacagcccagatgttcagggagttcattcgccaggtgggaagtaatgagatgtaaatcggggtcttttaggtaatag
ctgacaactggggtaggaatgggggttctgagcccagtgctggctgccgggctgtttatctctgagtcacatcagcacc
aagccacagcagccacctgccctagctccatctcttacagtcacaacaggatgtggtttgacatttactgggtcctgcat
ctggggtgcctgtgaaagttgctccctccacccacccaccttcagagcatcatgagaaccacactcaccgcatccgg
cacccaaccccctcctatgctgctctttctacctgggcccctggttagcatcctggcagtagaaatagaaggaaaggg
aaatagggaaagggaaacagggaaagggaaaagaaatctagctgctacggcttgcgctatggggccgacggctt
ctctcaaggggcttcgagatgtggcagtgtttaggttgtgtgtaaatgtggttgcattgtcaatagggacgctaaagttca
ggccacctttccatattctctgccagctccctgctcagagatagagcaatttacaccgcttccttcctaccctacccctag
cccacccccactctgaaaatttcccaccatcaacggcagaaagcagagaagcagacatcttctagttcctcccccac
tctcctctttccggtacctgtgagtcagctaggggagggcagctctcacccaggctgatagttcggtgacctggctttatc
tactggatgagttccgctgggag

SEQ ID NO. 128; hsa-mir-582-5p :

AGTAACTGGTTGAACAACTGTAA

3 repetitions placed in 3’ of the transgene or in 3’ of the WPRE

SEQ ID NO. 129; hsa-mir-5196-3p

CTGGGAGGGAGACGAGGATGA

3 repetitions placed in 3’ of the transgene

SEQ ID NO. 130; Synthetic promoter #1: Proximal Promoter CCL13

Ggcttcccatggtgaatggctggggcgcgtctgtgtccctttctcctctctggctccttgtggcctgaacagccagaagg
aagccatgccatgctgtttcagccctcagcttccctcttgcatttcctagaaaagtctttggtgcccagctccagctcagc
agattcaggatccccccttcatcatgacttggtcaacgccctgctcaggccaaggtcctctgagagttccaagcttctcca
ctccctataaaaggccggcggaacagccagaggagcagagaggcaaagaaacattgtgaaatctccaactctta
accttcaac

SEQ ID NO. 131; Proximal Promoter CCL18

ggggaagatttctcattagatcacgaaaggcctaactgtatataaaagattgaagcatgtgactctcttaaaaggaaa
aacaattgtgaaaatccattaaagcattctgctctatcaaaggaggctgtgaccactcatttctgagaaatatctgtcatg
tgaaaacataatcacatgattatgcataatcctaagcataatccctgggtgcttccaactcctggtcacccatctggaga
tacaacttctccataagcccctcaatcaacaagtgaaccactcgtttgtgtaccctaaacctttcaagtaaccataggca
accctgggctgagaactcacatgacaccaccatagttaaaatgtcttgcatcagcacctccaatgttcccatggtccag
tctgcctataaaaaggagagacaacagctcataccccagaaggaggccaggagttgtgagtttccaagccccagct
cactctgaccacttctctgcctgcccagcatc

SEQ ID NO. 132; Synthetic promoter #3: Proximal Promoter MRC1

Cccaggggaagctccgtcttccggcacaggtaatggcctgcagcttgatctccacccagccccatctgagcaggcc
gggagctcccaggctgtttcacttcTctccttcctgactcctcaccatcaccatcgccctctctcctccccaccccgccac
tcctctcccacacgtgtccctttctcccccttcctctgcgtctgctcttctcagaagttagcttacgaagcaaagttgttactttg
aattcctgtttttccagccaccctcatgtgacaggatgtctcctcagtagaggctttccctaaattcaggagccctttaaaa
gggagggcttcctctgtagttcttttcagctgggcagctctgggaacttggattaggtggagaggcagttgggggcctc
gttgttttgcgtcttagttccgccctcctgtccatcaggagaaggaaaggataaaccctgggcc

SEQ ID NO. 133; Synthetic promoter #4: Proximal Promoter LYZ

catacaaaacaatttcacaaaattgaatgttactcaaaaatcacagctcattttaagctgcacaaaatagtcatttttttctt
tataattgctcaaattcataatcaaacagaagaaagttcctgtcttggaagtagtgctatgccccaattcttccagagcc
agtactttaaacaattccatttcattattttcctgtagactaattcttaggacatcagcatatctctcttcaagcattaaaaaa
atctctttagagtcagtggatcaatagacagttcctgttttccacacaactgaaagggtggagcccccaaaccacaag
gggaagaaggaagttaaaagatgttaaatactggggccagctcaccctggtcagcctagcactctgacctagcagt
caac

SEQ ID NO. 134; Synthetic promoter #5: Proximal Promoter HLA-DR

Gcaaactctccaactgtcattgcacagacatatgatctgtatttagctctcactttaggtgtttccattgattctattctcacta
atgtgcttcaggtatatccctgtctagaagtcagattggggttaaagagtctgtccgtgattgactaacagtcttaaatactt
gatttgttgttgttgttgtcctgtttgtttaagaactttacttctttatccaatgaacggagtatcttgtgtcctggacccttgcaa
gaacccttcccctagcaacagatgcgtcatctcaaaatatttttctgattggccaaagagtaattgatttgcattttaatggt
cagactctattacaccccacattctcttttctttattcttgtctgttctgcctcactcccgagctctactgactcccaacagag
cgcccaagaagaaa

SEQ ID NO. 135; Synthetic promoter #6: Enhancer 008 – Proximal Promoter CHIT1

Aggactgagctctgagatccttctgaagaggttgggagaagaggagaatcagcaagagaaactgagaaggagg
gtcatgggcggtaggcgggaagcaggagagtgtggggtcagaggacagatgtagaaatcagttccaggaagcga
gggccgagtgtcagaagctgctgctgagtcactcaagatgaagacagaactcatcactggagtcactcaggcagcc
ttggtgaccttgataaaaatagtttaggtggagtaggtgccgggttggagcacaggcttggttggaatggggttaaggg
aggatgtgagcagtagaacagggtgcagccaacacagacaactactttggagaagttttgcaaaagggaagtaaa
aaatgggcagtggttgatgaggagaaacagtttgagagagggcagtggagaagcaagagagctggtctggaacc
cagctgcctgactcgtgagtcatttctcttcctccaaagccctattaagtctggggctgcttatggtcctcaccaactacac
aaagaaagtcagggtcatgctcatccatcaggaggttcagggccacttcccgctttcctctgtttggcaacactaagag
tcaccctctgattgttccagaaaagcaagaattgctaaaggccattgtgtcaagtttgcccaattcatgctgcttgacatct
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SEQ ID NO. 136; Synthetic promoter #7: Enhancer 015 – Proximal Promoter CHIT1

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SEQ ID NO. 137; Synthetic promoter #8: Enhancer 022 – Proximal Promoter CHIT1

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SEQ ID NO. 138; Synthetic promoter #9: Enhancer 029 – Proximal Promoter CHIT1

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SEQ ID NO. 139; Synthetic promoter #10: Enhancer 031 – Proximal Promoter CHIT1

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SEQ ID NO. 140; Synthetic promoter #11: Enhancer 034 – Proximal Promoter CHIT1

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SEQ ID NO. 141; Synthetic promoter #12: TAM1 – Proximal Promoter CHIT1

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SEQ ID NO. 142; Synthetic promoter #13: TAM2 – Proximal Promoter CHIT1

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SEQ ID NO. 143; Synthetic promoter #14: TAM3 – Proximal Promoter CHIT1

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SEQ ID NO. 144; Synthetic promoter #15: TAM4 – Proximal Promoter CHIT1

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SEQ ID NO. 145; Synthetic promoter #16: TAM5 – Proximal Promoter CHIT1

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SEQ ID NO. 146; Synthetic promoter #17: TAM6 – Proximal Promoter CHIT1

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SEQ ID NO. 147; Synthetic promoter #18: TAM7 – Proximal Promoter CHIT1

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SEQ ID NO. 148; Synthetic promoter #19: TAM8 – Proximal Promoter CHIT1

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SEQ ID NO. 149; Synthetic promoter #20: TAM9 – Proximal Promoter CHIT1

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SEQ ID NO. 150; Synthetic promoter #21: TAM10 – Proximal Promoter CHIT1

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SEQ ID NO. 151; Synthetic promoter #22: TAM11 – Proximal Promoter CHIT1

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SEQ ID NO. 152; Synthetic promoter #23: TAM12 – Proximal Promoter CHIT1
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ctggtttgtatgggctgcagcctgccgctgagctgcatc

SEQ ID NO. 153: VSVg-Cl7 I52R, I331E, E355L
KFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKARQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDI
AAPILSRMVGMISGTTTERLLWDDWA

SEQ ID NO. 154: VSVg-Cl12 N9Q, S48V, V333I, E353K
KFTIVFPHQQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKVHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRIDIA
APILSRMVGMISGTTTKRELWDDWA

SEQ ID NO. 155: VSVg-Cl26 N9G, K47G, I331E, T352S
KFTIVFPHGQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPGSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDI
AAPILSRMVGMISGTTSERELWDDWA

SEQ ID NO. 156: VSVg-Cl47 H8F, A51P, R329V, T352V
KFTIVFPFNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKPIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP

QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETVYIRVDIAAPI
LSRMVGMISGTTVERELWDDWA

SEQ ID NO. 157: VSVg-Cl135 N9Q, K47T, T328S, E355L
KFTIVFPHQQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPTSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFESRYIRVDIA
APILSRMVGMISGTTTERLLWDDWA

SEQ ID NO. 158: VSVg-Cl129 N9G, K50S, V333I, T351R
KFTIVFPHGQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHSAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRIDIA
APILSRMVGMISGTRTERELWDDWA

SEQ ID NO. 159: VSVg-Cl33 H8F, S48L, R329K
KFTIVFPFNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKLHKAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETKYIRVDIAAPI
LSRMVGMISGTTTERELWDDWA

SEQ ID NO. 160: VSVg-Cl59 H8Y, K47G

KFTIVFPYNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPGSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIA
APILSRMVGMISGTTTERELWDDWA

SEQ ID NO. 161: VSVg-Cl145 N9H, S48R, T352E
KFTIVFPHHQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKRHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE

RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIA
APILSRMVGMISGTTEERELWDDWA

SEQ ID NO. 162: VSVg-Cl139 H49F, R329T, T350G
KFTIVFPHGQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSFKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETTYIRVDIA
APILSRMVGMISGGTTERELWDDWA

SEQ ID NO. 163: VSVg-Cl58 H8L, M45L, I331E, E355R
KFTIVFPLNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKLPKSHKAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDIAA
PILSRMVGMISGTTTERRLWDDWA

SEQ ID NO. 164: VSVg-Cl87 K11E, S48F, Y330L, T352D
KFTIVFPHNQEGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKFHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRLIRVDIA
APILSRMVGMISGTTDERELWDDWA

SEQ ID NO. 165: VSVg-Cl386 N9D, A51S, I331T, E355H
KFTIVFPHDQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKSIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYTRVDI
AAPILSRMVGMISGTTTERHLWDDWA

SEQ ID NO. 166: VSVg-Cl223 A51T, R329W
KFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKTIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETWYIRVDI
AAPILSRMVGMISGTTTERELWDDWA

SEQ ID NO. 167: VSVg-Cl363 Q53A, I331E, T352I

KFTIVFPHNVKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKAIAADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDIAA
PILSRMVGMISGTTIERELWDDWA

SEQ ID NO. 168: VSVg-Cl549 F6P, Q10K, K50T, V333P, T352R
KFTIVRPHNKKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHTAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRPDIAAPI
LSRMVGMISGTTRERELWDDWA

SEQ ID NO. 169: VSVg-Cl477 S48M, Y330P, T351D
KFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKMHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRPIRVDIA
APILSRMVGMISGTDTERELWDDWA

SEQ ID NO. 170: VSVg-Cl164 N9T, I52T, R329K, T352E
KFTIVFPHTQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKATQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETKYIRVDIA
APILSRMVGMISGTTEERELWDDWA

SEQ ID NO. 171: VSVg-Cl167 K47V, D334A, R354D
KFTIVIPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPVSHKAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVAIAAPI
LSRMVGMISGTTTEDELWDDWA

SEQ ID NO. 172: VSVg-Cl436 H8S, H49A, R329H, T352Q
KFTIVFPSNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSAKAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY

CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETHYIRVDIAAPI
LSRMVGMISGTTQERELWDDWA

SEQ ID NO. 173: VSVg-Cl261 K11A, S48L, I331L, R354K
KFTIVFPHNQAGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKLHKAIQADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYLRVDIAAP
ILSRMVGMISGTTTEKELWDDWA

SEQ ID NO. 174: VSVg-Cl194 P7W, M45F, V333Y, R354V
KFTIVFWHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKFPKSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRYDIA
APILSRMVGMISGTTTEVELWDDWA

SEQ ID NO. 175: VSVg-Cl1003 N9R, Q53I, I331Q, R354M
KFTIVFPHRQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKAIIADG
WMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYQRVDIAA
PILSRMVGMISGTTTEMELWDDWA

SEQ ID NO. 176: VSVg-Cl368 H8S, I52V, V333Y, T351S
KFTIVFPSNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKAVQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRYDIA
APILSRMVGMISGTSTERELWDDWA

SEQ ID NO. 177: VSVg-Cl6915 I331E, E353K
KFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDI
AAPILSRMVGMISGTTTKRELWDDWA

SEQ ID NO. 178: VSVg-Cl125 Q10V, K50H, I331M, T352D
KFTIVFPHNVKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHHAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYMRVDI
AAPILSRMVGMISGTTDERELWDDWA

SEQ ID NO. 179: VSVg-Cl331 N9A, I331E, E353S
KFTIVFPHAQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYERVDI
AAPILSRMVGMISGTTTSRELWDDWA

SEQ ID NO. 180: VSVg-Cl86 H8G, A51S, E355W
KFTIVFPGNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKSIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIA
APILSRMVGMISGTTTERWLWDDWA

SEQ ID NO. 181: VSVg-Cl95 H8V, K47W, Y330M, T351D
KFTIVFPVNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPWSHKAIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRMIRVDI
AAPILSRMVGMISGTDTERELWDDWA

SEQ ID NO. 182: VSVg-Cl M N9Q, A51P, R329V, E353K
KFTIVFPHQQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTALQVKMPKSHKPIQAD
GWMCHASKWVTTCDFRWYGPKYITHSIRSFTPSVEQCKESIEQTKQGTWLNPGFP
PQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTT
WHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKM
QYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVE
RILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETVYIRVDIA
APILSRMVGMISGTTTKRELWDDWA

SEQ ID NO. 183: DAF-GS
METDTLLLWVLLLWVPGSTGDDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESF
VKIPGEKDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVE
YECRPGYRREPSLSPKLTCLQNLKWSTAVEFCKKKSCPNPGEIRNGQIDVPGGILF

GATISFSCNTGYKLFGSTSSFCLISGSSVQWSDPLPECREIYCPAHLQIDNGIIQGER
DHYGYRQSVTYACNKGFTMIGEHSIYCTVNNDEGEWSGHLHECRGKSLTSKVPPT
VQKPTTVNVPTTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSGT
TSGGGAHHHHHHFEHPHIQDAASQLPDDESLFFGDTGLSKNPIELVEGWFSSWKS
SIASFFFIIGLIIGLFLVLRVGIHLCIKLKHTKKRQIYTDIEMNRLGK

SEQ ID NO. 184: DAF-GPI
METDTLLLWVLLLWVPGSTGDDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESF
VKIPGEKDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVE
YECRPGYRREPSLSPKLTCLQNLKWSTAVEFCKKKSCPNPGEIRNGQIDVPGGILF
GATISFSCNTGYKLFGSTSSFCLISGSSVQWSDPLPECREIYCPAHLQIDNGIIQGER
DHYGYRQSVTYACNKGFTMIGEHSIYCTVNNDEGEWSGHLHECRGKSLTSKVPPT
VQKPTTVNVPTTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSGT
TSGGGAHHHHHHSGTTRLLSGHTCFTLTGLLGTLVTMGLLT

SEQ ID NO. 185: factor H-GS
METDTLLLWVLLLWVPGSTGDEDCNELPPRRNTEILTGSWSDQTYPEGTQAIYKCR
PGYRSLGNVIMVCRKGEWVALNPLRKCQKRPCGHPGDTPFGTFTLTGGNVFEYGV
KAVYTCNEGYQLLGEINYRECDTDGWTNDIPICEVVKCLPVTAPENGKIVSSAMEPD
REYHFGQAVRFVCNSGYKIEGDEEMHCSDDGFWSKEKPKCVEISCKSPDVINGSPI
SQKIIYKENERFQYKCNMGYEYSERGDAVCTESGWRPLPSCEEKGGAHHHHHHFE
HPHIQDAASQLPDDESLFFGDTGLSKNPIELVEGWFSSWKSSIASFFFIIGLIIGLFLVL
RVGIHLCIKLKHTKKRQIYTDIEMNRLGK

SEQ ID NO. 186: factor H-GPI
METDTLLLWVLLLWVPGSTGDEDCNELPPRRNTEILTGSWSDQTYPEGTQAIYKCR
PGYRSLGNVIMVCRKGEWVALNPLRKCQKRPCGHPGDTPFGTFTLTGGNVFEYGV
KAVYTCNEGYQLLGEINYRECDTDGWTNDIPICEVVKCLPVTAPENGKIVSSAMEPD
REYHFGQAVRFVCNSGYKIEGDEEMHCSDDGFWSKEKPKCVEISCKSPDVINGSPI
SQKIIYKENERFQYKCNMGYEYSERGDAVCTESGWRPLPSCEEKGGAHHHHHHS
GTTRLLSGHTCFTLTGLLGTLVTMGLLT

SEQ ID NO. 187: Kaposica-GS
METDTLLLWVLLLWVPGSTGDQDNEKCSQKTLIGYRLKMSRDGDIAVGETVELRCR
SGYTTYARNITATCLQGGTWSEPTATCNKKSCPNPGEIQNGKVIFHGGQDALKYGA
NISYVCNEGYFLVGREYVRYCMIGASGQMAWSSSPPFCEKEKCHRPKIENGDFKP
DKDYYEYNDAVHFECNEGYTLVGPHSIACAVNNTWTSNMPTCELAGCKFPSVTHG
YPIQGFSLTYKHKQSVTFACNDGFVLRGSPTITCNVTEWDPPLPKCVLGGAHHHHH
HFEHPHIQDAASQLPDDESLFFGDTGLSKNPIELVEGWFSSWKSSIASFFFIIGLIIGL
FLVLRVGIHLCIKLKHTKKRQIYTDIEMNRLGK

SEQ ID NO. 188: Kaposica-GPI
METDTLLLWVLLLWVPGSTGDQDNEKCSQKTLIGYRLKMSRDGDIAVGETVELRCR
SGYTTYARNITATCLQGGTWSEPTATCNKKSCPNPGEIQNGKVIFHGGQDALKYGA
NISYVCNEGYFLVGREYVRYCMIGASGQMAWSSSPPFCEKEKCHRPKIENGDFKP
DKDYYEYNDAVHFECNEGYTLVGPHSIACAVNNTWTSNMPTCELAGCKFPSVTHG
YPIQGFSLTYKHKQSVTFACNDGFVLRGSPTITCNVTEWDPPLPKCVLGGAHHHHH
HSGTTRLLSGHTCFTLTGLLGTLVTMGLLT

SEQ ID NO. 189: SPICE-GS
METDTLLLWVLLLWVPGSTGDCCTIPSRPINMTFKNSVETDANANYNIGDTIEYLCLP
GYRKQKMGPIYAKCTGTGWTLFNQCIKRRCPSPRDIDNGHLDIGGVDFGSSITYSC
NSGYYLIGEYKSYCKLGSTGSMVWNPKAPICESVKCQLPPSISNGRHNGYNDFYTD
GSVVTYSCNSGYSLIGNSGVLCSGGEWSNPPTCQIVKCPHPTILNGYLSSGFKRSY
SYNDNVDFTCKYGYKLSGSSSSTCSPGNTWQPELPKCVRGGAHHHHHHFEHPHI
QDAASQLPDDESLFFGDTGLSKNPIELVEGWFSSWKSSIASFFFIIGLIIGLFLVLRVGI
HLCIKLKHTKKRQIYTDIEMNRLGK

SEQ ID NO. 190: SPICE-GPI
METDTLLLWVLLLWVPGSTGDCCTIPSRPINMTFKNSVETDANANYNIGDTIEYLCLP
GYRKQKMGPIYAKCTGTGWTLFNQCIKRRCPSPRDIDNGHLDIGGVDFGSSITYSC
NSGYYLIGEYKSYCKLGSTGSMVWNPKAPICESVKCQLPPSISNGRHNGYNDFYTD
GSVVTYSCNSGYSLIGNSGVLCSGGEWSNPPTCQIVKCPHPTILNGYLSSGFKRSY
SYNDNVDFTCKYGYKLSGSSSSTCSPGNTWQPELPKCVRGGAHHHHHHSGTTRL
LSGHTCFTLTGLLGTLVTMGLLT

SEQ ID NO. 191: ABD-GS
METDTLLLWVLLLWVPGSTGDGHSLQAAQHDEAVDANSLAEAKVLANRELDKYGV
SDYYKNLINNAKTVEGVKALIDEILAALPGGAHHHHHHFEHPHIQDAASQLPDDESL
FFGDTGLSKNPIELVEGWFSSWKSSIASFFFIIGLIIGLFLVLRVGIHLCIKLKHTKKRQI
YTDIEMNRLGK

SEQ ID NO. 192: ABD-GPI
METDTLLLWVLLLWVPGSTGDGHSLQAAQHDEAVDANSLAEAKVLANRELDKYGV
SDYYKNLINNAKTVEGVKALIDEILAALPGGAHHHHHHNLENGGTSLSEKTVLLLVTP
FLAAAWSLHP

SEQ ID NO. 193: M Synthetic promoter #24: Enhancer 030 – Proximal Promoter CHIT1

agctagagattctgggggcccttcaaacttctttgggacatgtatgtgtaatttcctagtaaaagagttttgcctgcttcttctt
ctttctccccctggtgtctgcctgcagtactacaatctccctagtggtgaaatagtgtgcctgcctttgttctccgaggctca
caacatgctattcaactctgcactctgagtcaggcaagacagaaaccagtaccttgggtaacccccacaaaaccca
ggagaaacagtttgagagagggcagtggagaagcaagagagctggtctggaacccagctgcctgactcgtgagtc
atttctcttcctccaaagccctattaagtctggggctgcttatggtcctcaccaactacacaaagaaagtcagggtcatg
ctcatccatcaggaggttcagggccacttcccgctttcctctgtttggcaacactaagagtcaccctctgattgttccaga
aaagcaagaattgctaaaggccattgtgtcaagtttgcccaattcatgctgcttgacatcttacccctccccaccctgctc
ccatccccccccacccagtgcccctgattgcaacactcctggctggggtgggacagggtggccagataaaagcaga
gcaggacctggaaagctggtttgtatgggctgcagcctgccgctgagctgcatc

SEQ ID NO. 194 H141A F147A LVGP

MGQIVTFFQEVPHVIEEVMNIVLIALSVLAVLKGLYNFATCGLVGLVTFLLLCGRSCTT
SLYKGVYELQTLELNMETLNMTMPLSCTKNNSHHYIMVGNETGLELTLTNTSIINHKF
CNLSDAHKKNLYDHALMSIISTF**A**LSIPN**A**NQ**Y**EAMSCDFNGGKISVQYNLSHSYAG
DAANHCGTVANGVLQTFMRMAWGGSYIALDSGRGNWDCIMTSYQYLIIQNTTWED
HCQFSRPSPIGYLGLLSQRTRDIYISRRLLGTFTWTLSDSEGKDTPGGYCLTRWMLI
EAELKCFGNTAVAKCNEKHDEEFCDMLRLFDFNKQAIQRLKAEAQMSIQLINKAVNA

LINDQLIMKNHLRDIMGIPYCNYSKYWYLNHTTTGRTSLPKCWLVSNGSYLNETHFS
DDIEQQADNMITEMLQKEYMERQGKTPLGLVDLFVFSTSFYLISIFLHLVKIPTHRHIV
GKSCPKPHRLNHMGICSCGLYKQPGVPVKWKR*

SEQ ID NO. 195 Y150A F446L LVGP

MGQIVTFFQEVPHVIEEVMNIVLIALSVLAVLKGLYNFATCGLVGLVTFLLLCGRSCTT
SLYKGVYELQTLELNMETLNMTMPLSCTKNNSHHYIMVGNETGLELTLTNTSIINHKF
CNLSDAHKKNLYDHALMSIISTFHLSIPNFNQ**Y**EAMSCDFNGGKISVQYNLSHSYAG
DAANHCGTVANGVLQTFMRMAWGGSYIALDSGRGNWDCIMTSYQYLIIQNTTWED
HCQFSRPSPIGYLGLLSQRTRDIYISRRLLGTFTWTLSDSEGKDTPGGYCLTRWMLI
EAELKCFGNTAVAKCNEKHDEEFCDMLRLFDFNKQAIQRLKAEAQMSIQLINKAVNA
LINDQLIMKNHLRDIMGIPYCNYSKYWYLNHTTTGRTSLPKCWLVSNGSYLNETHFS
DDIEQQADNMITEMLQKEYMERQGKTPLGLVDLFVFSTSFYLISI**L**LHLVKIPTHRHIV
GKSCPKPHRLNHMGICSCGLYKQPGVPVKWKR*

SEQ ID NO. 196 LVGP WT

MGQIVTFFQEVPHVIEEVMNIVLIALSVLAVLKGLYNFATCGLVGLVTFLLLCGRSCTT
SLYKGVYELQTLELNMETLNMTMPLSCTKNNSHHYIMVGNETGLELTLTNTSIINHKF
CNLSDAHKKNLYDHALMSIISTFHLSIPNFNQYEAMSCDFNGGKISVQYNLSHSYAG
DAANHCGTVANGVLQTFMRMAWGGSYIALDSGRGNWDCIMTSYQYLIIQNTTWED
HCQFSRPSPIGYLGLLSQRTRDIYISRRLLGTFTWTLSDSEGKDTPGGYCLTRWMLI
EAELKCFGNTAVAKCNEKHDEEFCDMLRLFDFNKQAIQRLKAEAQMSIQLINKAVNA
LINDQLIMKNHLRDIMGIPYCNYSKYWYLNHTTTGRTSLPKCWLVSNGSYLNETHFS
DDIEQQADNMITEMLQKEYMERQGKTPLGLVDLFVFSTSFYLISIFLHLVKIPTHRHIV
GKSCPKPHRLNHMGICSCGLYKQPGVPVKWKR*

SEQ ID NO. 197 Synthetic promoter #25: Proximal Promoter CHIT1

Gagaaacagtttgagagagggcagtggagaagcaagagagctggtctggaacccagctgcctgactcgtgagtc
atttctcttcctccaaagccctattaagtctggggctgcttatggtcctcaccaactacacaaagaaagtcagggtcatg
ctcatccatcaggaggttcagggccacttcccgctttcctctgtttggcaacactaagagtcaccctctgattgttccaga
aaagcaagaattgctaaaggccattgtgtcaagtttgcccaattcatgctgcttgacatcttacccctccccaccctgctc
ccatccccccccacccagtgcccctgattgcaacactcctggctggggtgggacagggtggccagataaaagcaga
gcaggacctggaaagctggtttgtatgggctgcagcctgccgctgagctgcatc

SEQ ID NO. 198 hCD80trc273

MGHTRRQGTSPSKCPYLNFFQLLVLAGLSHFCSGVIHVTKEVKEVATLSCGHNVSV
EELAQTRIYWQKEKKMVLTMMSGDMNIWPEYKNRTIFDITNNLSIVILALRPSDEGTY
ECVVLKYEKDAFKREHLAEVTLSVKADFPTPSISDFEIPTSNIRRIICSTSGGFPEPHL
SWLENGEELNAINTTVSQDPETELYAVSSKLDFNMTTNHSFMCLIKYGHLRVNQTFN
WNTTKQEHFPDNLLPSWAITLISVNGIFVICCLTYCFAPRCRE

SEQ ID NO. 199 CD28 mu9.3 scFv

EVKLQQSGPGLVTPSQSLSITCTVSGFSLSDYGVHWVRQSPGQGLEWLGVIWAGG
GTNYNSALMSRKSISKDNSKSQVFLKMNSLQADDTAVYYCARDKGYSYYYSMDYW
GQGTSVTVSSGGGGSGGGGSGGGGSDIELTQSPASLAVSLGQRATISCRASESVE
YYVTSLMQWYQQKPGQPPKLLIFAASNVESGVPARFSGSGSGTNFSLNIHPVDEDD
VAMYFCQQSRKVPYTFGGGTKLEIKR

SEQ ID NO. 200 CD28 scaffold (G4S)3 linker, short PDGFR stalk, PDGFR TM and CT truncated

GGGGSGGGGSGGGGSAVGQDTQEVIVVPHSLPFKVVVISAILALVVLTIISLIILIMLW
QKKPR

SEQ ID NO. 201 4B1-4 in scaffold

METDTLLLWVLLLWVPGSTGDQVQLQQPGAELVKPGASVKLSCKASGYTFSSYWM
HWVKQRPGQVLEWIGEINPGNGHTNYNEKFKSKATLTVDKSSSTAYMQLSSLTSED
SAVYYCARSFTTARGFAYWGQGTLVTVSAGGGGSGGGGSGGGGSDIVMTQSPAT
QSVTPGDRVSLSCRASQTISDYLHWYQQKSHESPRLLIKYASQSISGIPSRFSGSGS
GSDFTLSINSVEPEDVGVYYCQDGHSFPPTFGGGTKLEIKSASESKYGPPCPPCPV
VVISAILALVVLTIISLIILIMLWQKKPR

SEQ ID NO. 202: Vesicular stomatitis Indiana virus (strain San Juan) Glycoprotein

MKCLLYLAFLFIGVNCKFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTAI
QVKMPKSHKAIQADGWMCHASKWVTTCDFRWYGPKYITQSIRSFTPSVEQCKESI
EQTKQGTWLNPGFPPQSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFING
KCSNYICPTVHNSTTWHSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRS
NYFAYETGGKACKMQYCKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISA
PSQTSVDVSLIQDVERILDYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIIN
GTLKYFETRYIRVDIAAPILSRMVGMISGTTTERELWDDWAPYEDVEIGPNGVLRTS
SGYKFPLYMIGHGMLDSDLHLSSKAQVFEHPHIQDAASQLPDDESLFFGDTGLSKN
PIELVEGWFSSWKSSIASFFFIIGLIIGLFLVLRVGIHLCIKLKHTKKRQIYTDIEMNRLG
K

SEQ ID NO. 203: Vesicular stomatitis Indiana virus (strain San Juan) Glycoprotein without signal peptide

KFTIVFPHNQKGNWKNVPSNYHYCPSSSDLNWHNDLIGTAIQVKMPKSHKAIQADG
WMCHASKWVTTCDFRWYGPKYITQSIRSFTPSVEQCKESIEQTKQGTWLNPGFPP
QSCGYATVTDAEAVIVQVTPHHVLVDEYTGEWVDSQFINGKCSNYICPTVHNSTTW
HSDYKVKGLCDSNLISMDITFFSEDGELSSLGKEGTGFRSNYFAYETGGKACKMQY
CKHWGVRLPSGVWFEMADKDLFAAARFPECPEGSSISAPSQTSVDVSLIQDVERIL
DYSLCQETWSKIRAGLPISPVDLSYLAPKNPGTGPAFTIINGTLKYFETRYIRVDIAAPI
LSRMVGMISGTTTERELWDDWAPYEDVEIGPNGVLRTSSGYKFPLYMIGHGMLDS
DLHLSSKAQVFEHPHIQDAASQLPDDESLFFGDTGLSKNPIELVEGWFSSWKSSIAS
FFFIIGLIIGLFLVLRVGIHLCIKLKHTKKRQIYTDIEMNRLGK

SEQ ID NO. 204: **Nanobody (VHH) CD14 3RMB1-1-14**
QVQLQESGGGLVQSGGSLRLSCAVS**GSIFSIVD**MGWYRQAPGKGRELVAE**LSSGS**
TNYADSVLGRFTISRDNAKNTVYLQMNSLKPEDTAVYYC**NADLTGSSWSPYRYLEV**
WGQGTQVTVSS

5

Claims

1. A viral vector having a lipid bilayer envelope comprising:

   (a) a VHH binding domain displayed on the exterior of the envelope that is cell-type specific;

   (b) a VSV-G envelope protein displayed on the exterior of the envelope that is able to facilitate infection of the same cell type as in (a), wherein the VSV-G envelope protein of SEQ ID NO: 203 comprises an amino acid substitution selected from I331E, I331W, I331M, I331L, I331Q, and I331R; and

   (c) a nucleic acid molecule comprising a promoter expressible in the same cell type as in (a).

2. The viral vector according to claim 1, wherein the promoter is cell-type specific.

3. The viral vector according to claim 1, wherein the VSV-G mutation at position 331 is I331E.

4. The viral vector according to claim 3, wherein the mutant VSV-G envelope protein comprises mutations I52R, I331E, and E355L.

5. The viral vector according to claim 3, wherein the mutant VSV-G envelope protein comprises mutations N9G, K47G, I331E, and T352S.

6. The viral vector according to claim 3, wherein the mutant VSV-G envelope protein comprises mutations H8L, M45L, I331E, and E355R.

7. The viral vector according to claim 3, wherein the mutant VSV-G envelope protein comprises mutations Q53A, I331E, and T352I.

8. The viral vector according to claim 1, wherein the viral vector is a retroviral vector.

9. The viral vector according to claim 1, wherein the viral vector is a lentiviral vector.

10. The viral vector according to claim 1, wherein the viral envelope is free from MHC class I or is devoid of MHC class I.

11. The viral vector according to claim 1, wherein the viral vector displays a high level of CD47, an agonistic CD3 scFv, 41BBL or CD80 on the surface of the envelope.

12. The viral vector according to claim 1, wherein the VHH binding domain is specific for CD3ε, CD8, or the T cell receptor (TCR).

13. The viral vector according to claim 1, wherein the VHH binding domain is specific for CD14, CD16, CCR1, CCR2, CXCR4, or CD64.

14. The viral vector according to claim 1, wherein the nucleic acid molecule encodes a chimeric antigen receptor (CAR).

15. The viral vector according to claim 1, wherein the promoter is expressed only in a T cell.

16. The viral vector according to claim 1 , wherein the promoter is expressed only in a monocyte or a macrophage.

17. The viral vector according to claim 1 , wherein the promoter is expressed only in a NK cell.

18. The viral vector according to claim 1, wherein the viral vector is a retroviral vector for use in diagnosis, prevention, or treatment of disease.

19. The viral vector for use according to claim 18, wherein the disease is selected from a blood cancer, gastric cancer, lung cancer, colorectal cancer, and breast cancer.

20. A method of making the viral vector of any of claims 1 to 17, comprising the steps of:

(a) engineering a cell to express a membrane-anchored VHH binding domain that is cell-type specific;

(b) engineering the cell to express a VSV-G envelope protein displayed on the exterior of the envelope that is able to facilitate infection of the same cell type as in (a), wherein the VSV-G envelope protein of SEQ ID NO: 203 comprises an amino acid substitution selected from I331E, I331W, I331 at position 331;

(c) replicating in the cell a nucleic acid vector comprising a promoter expressible the same cell type as in (a); and

(d) harvesting the viral vector in the form of vesicles from the cell.

21. The method according to claim 20, wherein the cell is a 293T-derived cell line.

22. A virus-like particle (VLP) having a lipid bilayer envelope comprising:

(a) a VHH binding domain displayed on the exterior of the envelope that is cell-type specific; and

(b) a VSV-G envelope protein displayed on the exterior of the envelope that is able to facilitate infection of the same cell type as in (a), wherein the VSV-G envelope protein comprises one or more mutations an amino acid substitution at position 331.