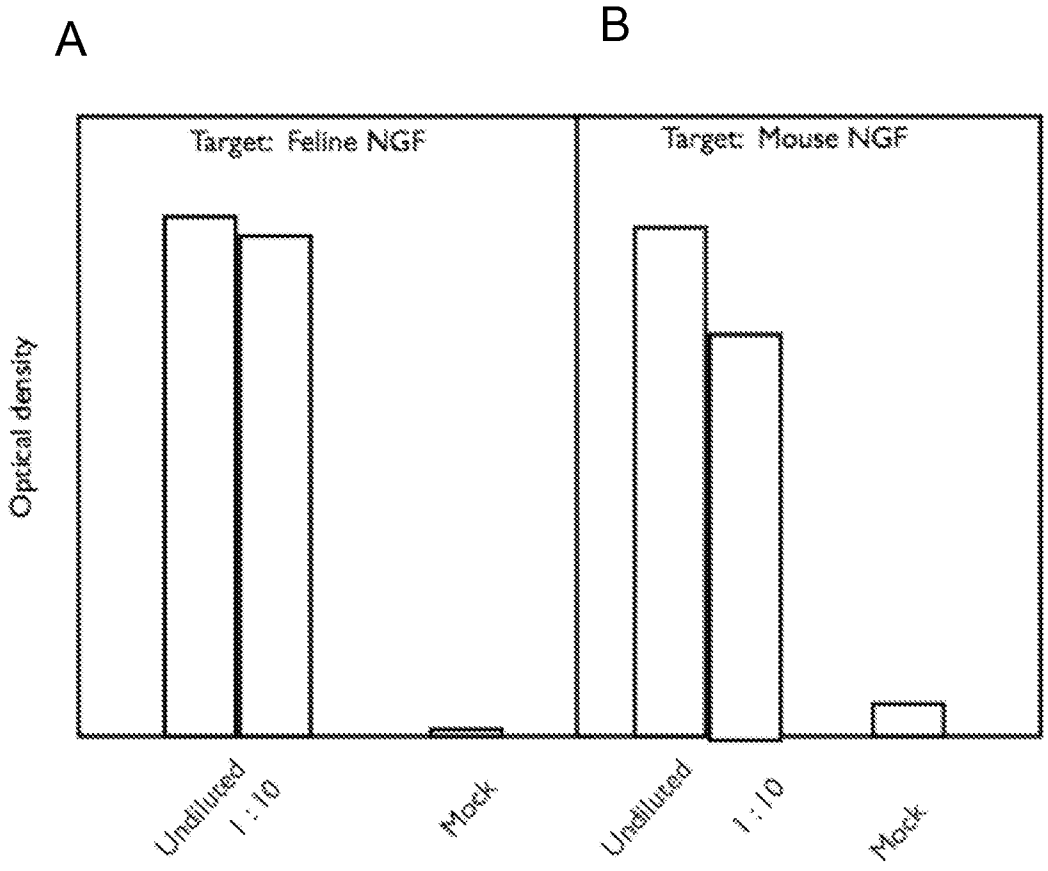

A
B
Target: Feline NGF
Target: Mouse NGF
Optical density
Undiluted
1 : 10
Mock
Undiluted
1 : 10
Mock

Figure 1

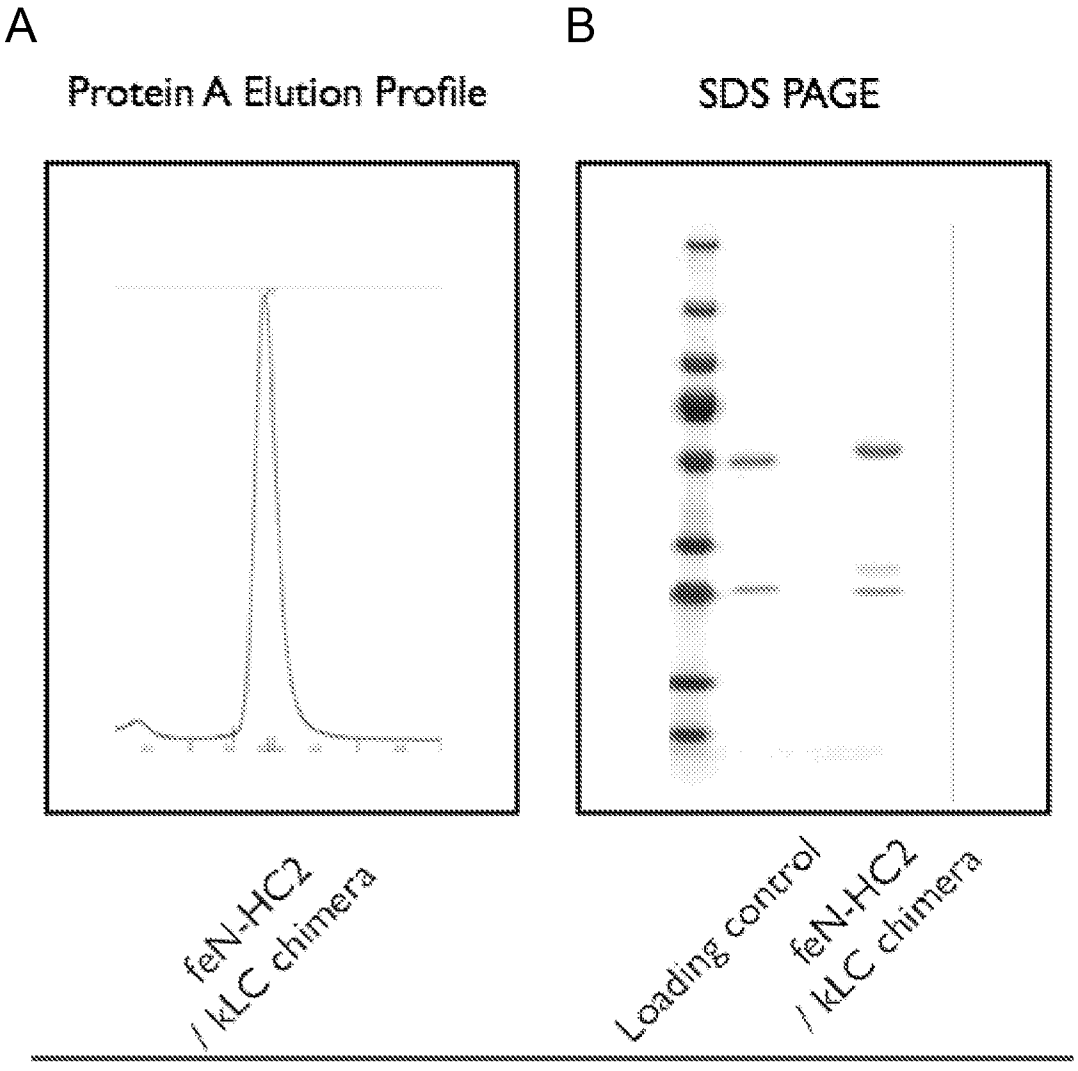

A
Protein A Elution Profile
B
SDS PAGE
feN-HC2
/ kLC chimera
Loading control
feN-HC2
/ kLC chimera

Figure 2

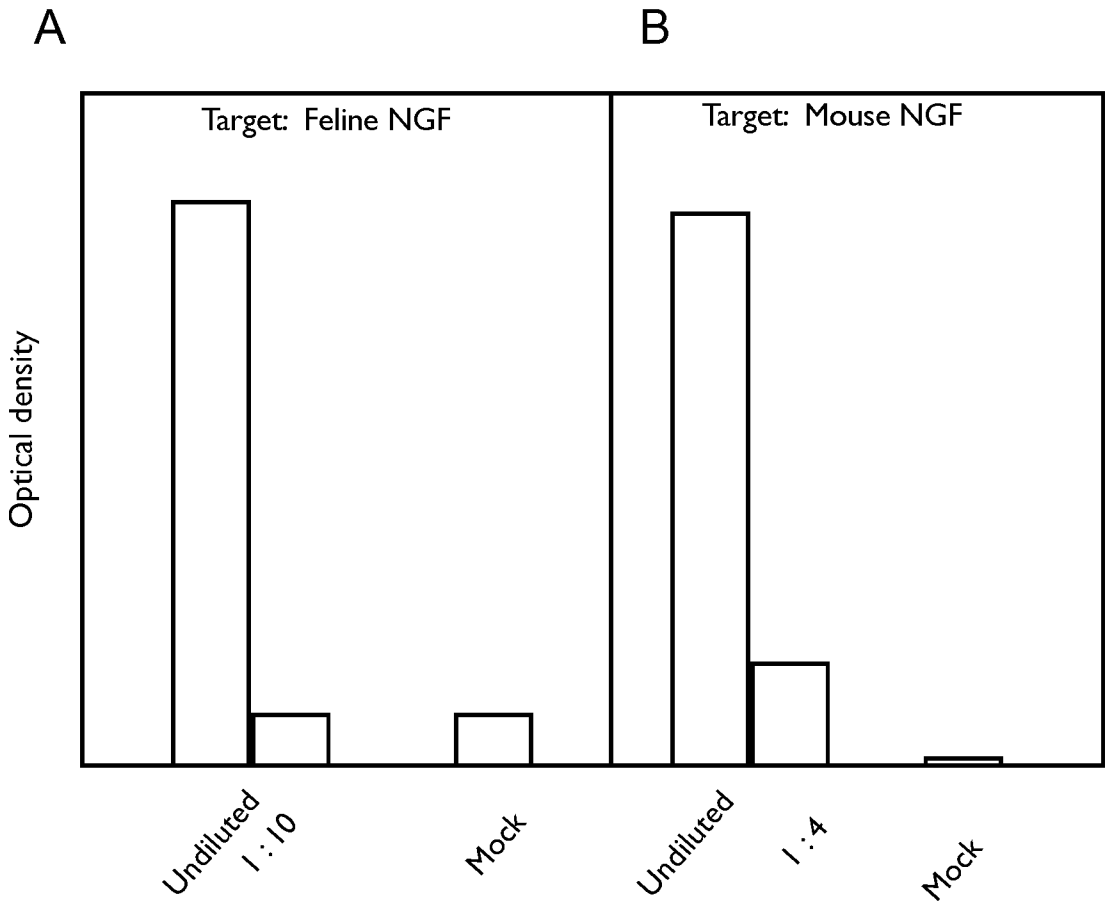
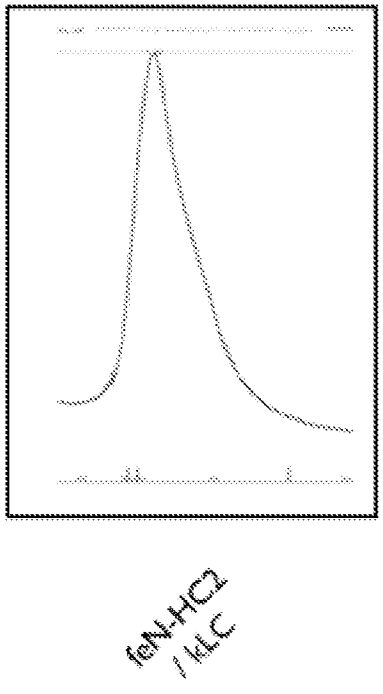

A
B
Target: Feline NGF
Target: Mouse NGF
Optical density
Undiluted
1 : 10
Mock
Undiluted
1 : 4
Mock

Figure 3

A


Protein A Elution Profile
feN-HC2
/ kLC

B

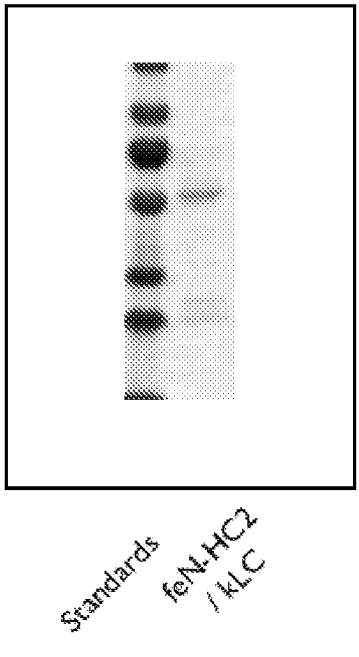

SDS PAGE
Standards
feN-HC2
/ kLC

Figure 4

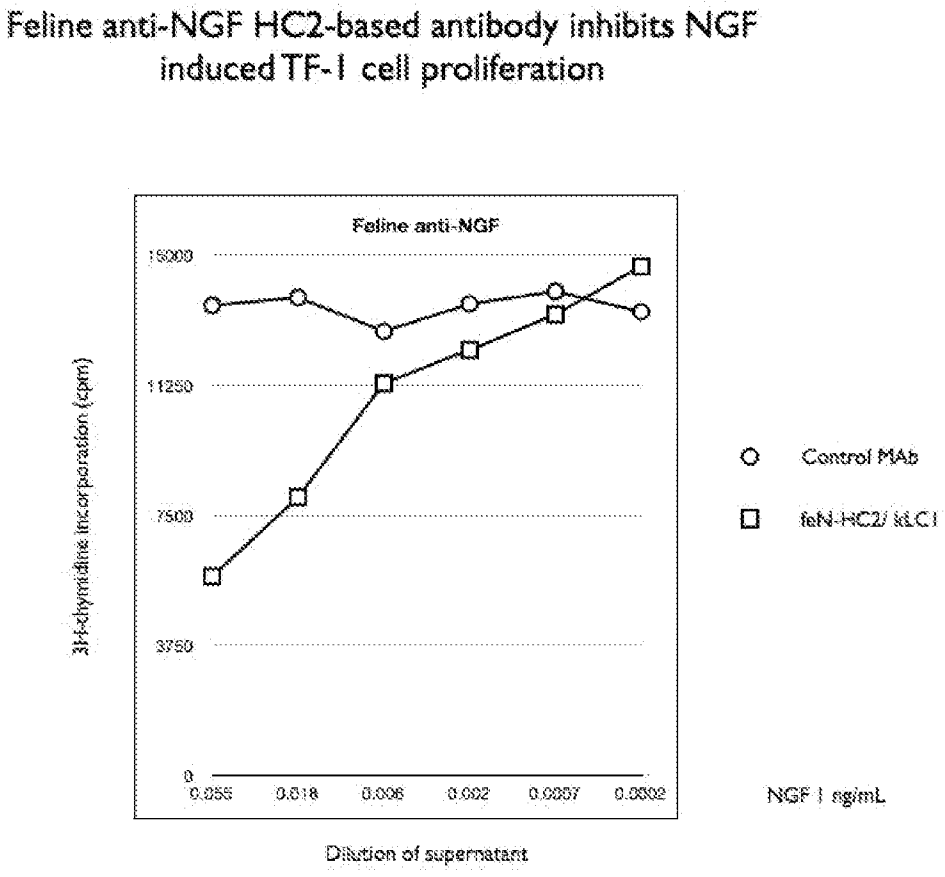

Feline anti-NGF HC2-based antibody inhibits NGF induced TF-1 cell proliferation
Feline anti-NGF
15000
11250
7500
3750
0
3H-thymidine incorporation (cpm)
0.255
0.018
0.006
0.002
0.0007
0.0002
Dilution of supernatant
Control MAb
feN-HC2/ kLC1
NGF 1 ng/mL

Figure 5

Feline HC2-based antibodies are inactive at fixing complement

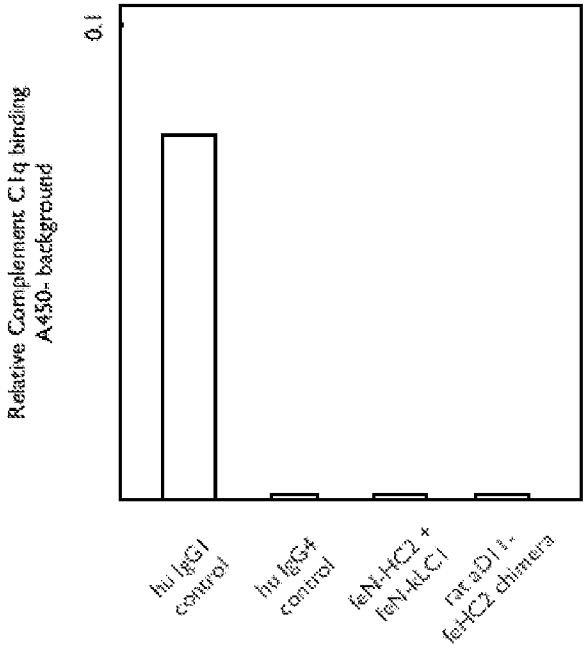


Figure 6

MGVPTQLLGLLLLWITDAIC**DIQMTQSPASLSASLGETVTIECR**
ASEDIYNALAWYQQKPGKSPQLLIYNTDTLHTGVPSRFSGSG
SGTQYSLKINSLQSEDVASYFCQHYFHYPRTFGGGTKLELKR
SDAQPSVFLFQPSLDELHTGSASIVCILNDFYPKEVNVKWKVD
GVVQTKASKESTTEQNSKDSTYSLSSTLTMSRTEYQSHEKFSC
EVTHKSLASTLVKSFNRSECQRE**

Figure 7 – Chimeric light chain

MAVLVLLLCLVTFPTCVLS**QVQLKESGPGLVQPSQTLSLTCTVSGFS**
LTNNNVNWVRQATGRGLEWMGGVWAGGATDYNSALKSRLTITRD
TSKSQVFLKMHSLQSEDTATYYCARDGGYSSSTLYAMDAWGQGT
SVTVSSASTTAPSVFPLAPSCGTTSGATVALACLVLGYFPEPVTVSW
NSGALTSGVHTFPAVLQASGLYSLSSMVTVPSSRWLSDTFTCNVAH
PPSNTKVDKTVRKTDHPPGPKPCDCPKCPPPEMLGGPSIFIFPPKPK
DTLSISRTPEVTCLVVDLGPDDSDVQITWFVDNTQVYTAKTSPREEQ
FNSTYRVVSVLPILHQDWLKGKEFKCKVNSKSLPSPIERTISKAKGQP
HEPQVYVLPPAQEELSRNKVSVTCLIKSFHPPDIAVEWEITGQPEPE
NNYRTTPPQLDSDGTYFVYSKLSVDRSHWQRGNTYTCSVSHEALH
SHHTQKSLTQSPGK**

Figure 8 – Chimeric heavy chain

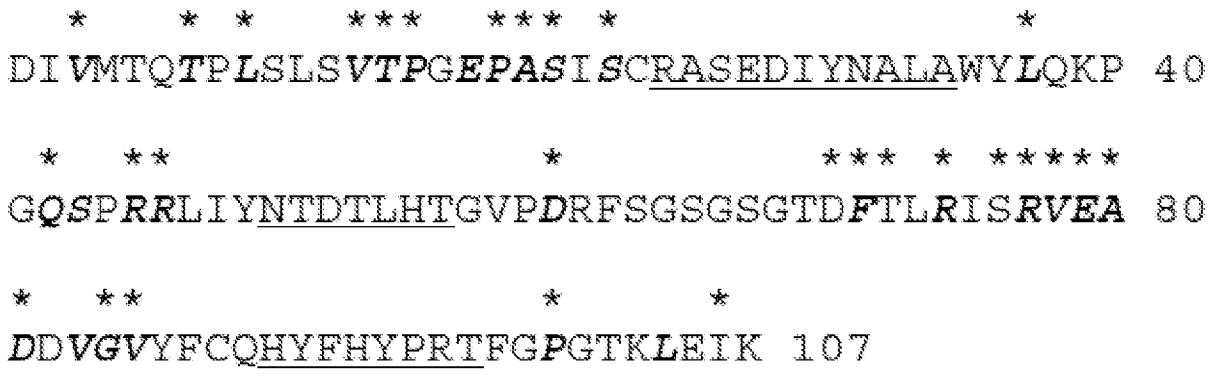


Figure 9 – Light chain variable domain

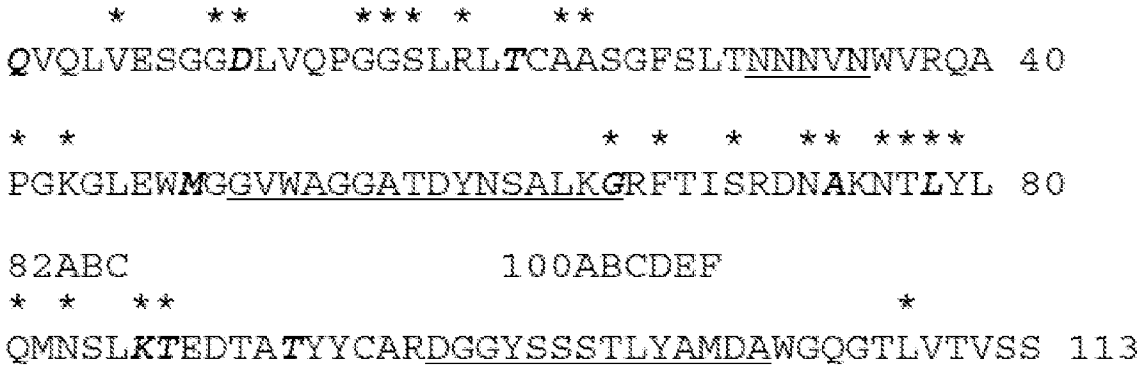


Figure 10 – Heavy chain variable domain

DIVMTQTPLSLSVTPGEPASISCRASEDIYNALAWYLQKPGQSP
RRLIYNTDTLHTGVPDRFSGSGSGTDFTLRISRVEADDVGVYFC
QHYFHYPRTFGPGTKLEIKRSDAQPSVFLFQPSLDELHTGSASI
VCILNDFYPKEVNVKWKVDGVVQTKASKESTTEQNSKDSTYSL
SSTLTMSRTEYQSHEKFSCEVTHKSLASTLVKSFNRSECQRE

Figure 11 – Felinised anti-NGF VL kappa light chain

QVQLVESGGDLVQPGGSLRLTCAASGFSLTNNNVNWVRQAPGK
GLEWMGGVWAGGATDYNSALKGRFTISRDNAKNTLYLQMNSLKT
EDTATYYCARDGGYSSSTLYAMDAWGQGTLVTVSSASTTAPSVF
PLAPSCGTTSGATVALACLVLGYFPEPVTVSWNSGALTSGVHTFPA
VLQASGLYSLSSMVTVPSSRWLSDTFTCNVAHPPSNTKVDKTVRK
TDHPPGPKPCDCPKCPPPEMLGGPSIFIFPPKPKDTLSISRTPEVTC
LVVDLGPDDSDVQITWFVDNTQVYTAKTSPREEQFNSTYRVVSVLP
ILHQDWLKGKEFKCKVNSKSLPSPIERTISKAKGQPHEPQVYVLPPA
QEELSRNKVSVTCLIKSFHPPDIAVEWEITGQPEPENNYRTTPPQLD
SDGTYFVYSKLSVDRSHWQRGNTYTCSVSHEALHSHHTQKSLTQS
PGK

Figure 12 –Felinised anti-NGF VH heavy chain

QVQLVESGAELVQPGESLRLTCAASGFSLT
NNNVNWVRQAPGKGLEWMGGVWAGGATD
YNSALKSRLTITRDTSKNTVFLQMHSLQSED
TATYYCARDGGYSSSTLYAMDAWGQGTTV
TVSA

Figure 13 – Alternative felinised anti-NGF VH heavy chain (feN2-VH)

DIEMTQSPLSLSVTPGESVSISCRASEDIYNA
LAWYLQKPGRSPRLLIYNTDTLHTGVPDRFS
GSGSGTDFTLKISRVQTEDVGVYFCQHYFH
YPRTFGQGTKLELK

Figure 14 – Alternative felinised anti-NGF Vk light chain (feN2-Vk)

*MAVLVLLLCLVTFPTCVLS*QVQLVESGAELV
QPGESLRLTCAASGFSLTNNNVNWVRQAP
GKGLEWMGGVWAGGATDYNSALKSRLTIT
RDTSKNTVFLQMHSLQSEDTATYYCARDGG
YSSSTLYAMDAWGQGTTVTVSAASTTAPSV
FPLAPSCGTTSGATVALACLVLGYFPEPVTV
SWNSGALTSGVHTFPAVLQASGLYSLSSMV
TVPSSRWLSDTFTCNVAHPPSNTKVDKTVR
KTDHPPGPKPCDCPKCPPPEMLGGPSIFIFP
PKPKDTLSISRTPEVTCLVVDLGPDDSDVQIT
WFVDNTQVYTAKTSPREEQFNSTYRVVSVL
PILHQDWLKGKEFKCKVNSKSLPSPIERTISK
AKGQPHEPQVYVLPPAQEELSRNKVSVTCLI
KSFHPPDIAVEWEITGQPEPENNYRTTPPQL
DSDGTYFVYSKLSVDRSHWQRGNTYTCSV
SHEALHSHHTQKSLTQSPGK

Figure 15 – Alternative complete feline anti-NGF IgG heavy chain (feN2-HC2)

*MGVPTQLLGLLLLWITDAIC*DIEMTQSPLSLS
VTPGESVSISCRASEDIYNALAWYLQKPGRS
PRLLIYNTDTLHTGVPDRFSGSGSGTDFTLKI
SRVQTEDVGVYFCQHYFHYPRTFGQGTKLE
LKRSDAQPSVFLFQPSLDELHTGSASIVCILN
DFYPKEVNVKWKVDGVVQTKASKESTTEQN
SKDSTYSLSSTLTMSRTEYQSHEKFSCEVT
HKSLASTLVKSFNRSECQRE

Figure 16 – Alternative complete feline anti-NGF IgG kappa light chain (feN2-kLC)

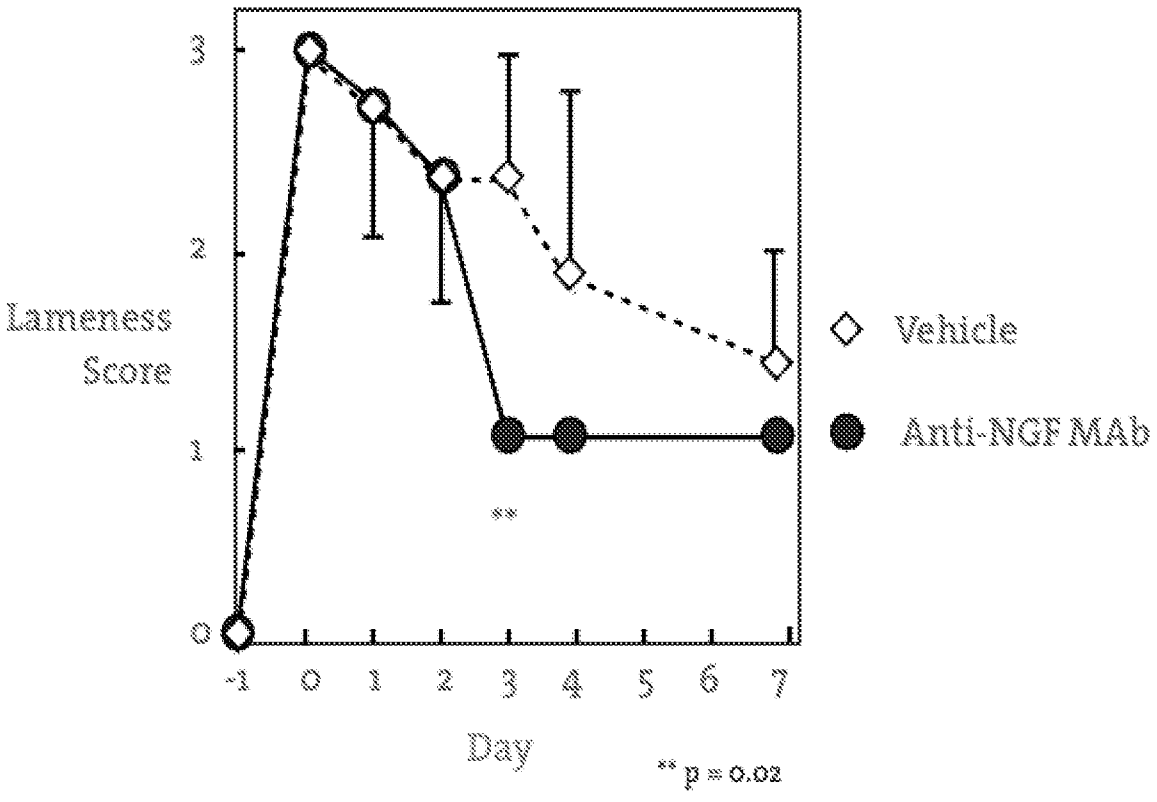

Lameness Score
3
2
1
0
-1
0
1
2
3
4
5
6
7
Day
**
** p = 0.02
Vehicle
Anti-NGF MAb

Figure 17