Figure 1

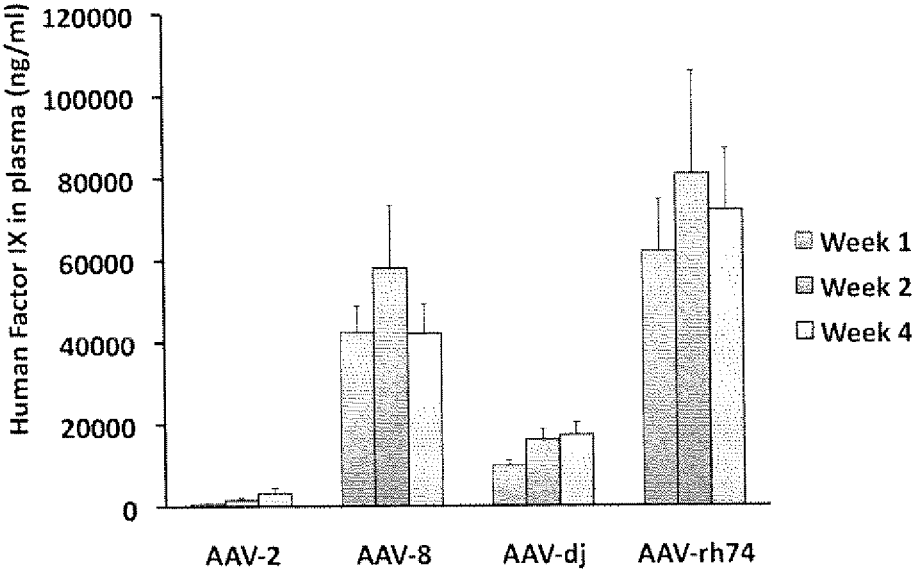

Human Factor IX in plasma (ng/ml)
120000
100000
80000
60000
40000
20000
0
AAV-2
AAV-8
AAV-dj
AAV-rh74
Week 1
Week 2
Week 4

Figure 2

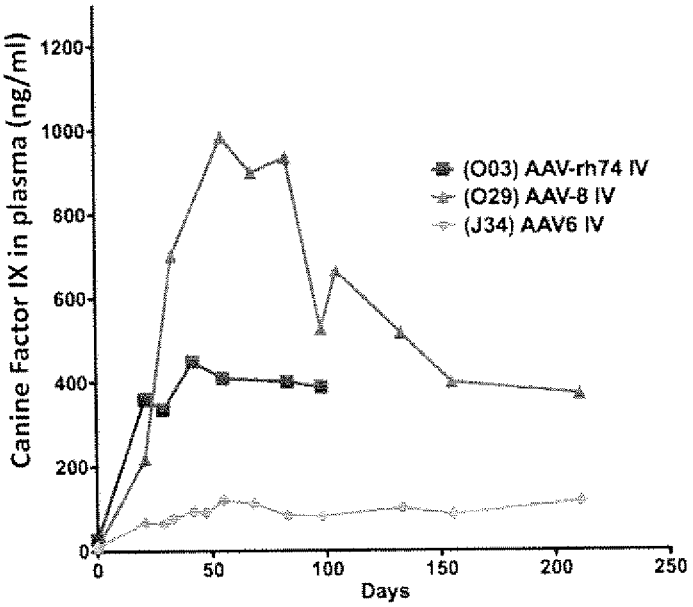

Canine Factor IX in plasma (ng/ml)
1200
1000
800
600
400
200
0
0
50
100
150
200
250
Days
(O03) AAV-rh74 IV
(O29) AAV-8 IV
(J34) AAV6 IV

Figure 3 (SEQ ID NOs:1-4)

Rh74 VP1 Amino Acid (SEQ ID NO:1):
MAADGYLPDWLEDNLSEGIREWWDLKPGAPKPKANQQKQDNGRGLVLPGYKYLGPFNGLDK
GEPVNAADAAALEHDKAYDQQLQAGDNPYLRYNHADAEFQERLQEDTSFGGNLGRAVFQAK
KRVLEPLGLVESPVKTAPGKKRPVEPSPQRSPDSSTGIGKKGQQPAKKRLNFGQTGDSESVPDPQ
PIGEPPAGPSGLGSGTMAAGGGAPMADNNEGADGVGSSSGNWHCDSTWLGDRVITTSTRTWAL
PTYNNHLYKQISNGTSGGSTNDNTYFGYSTPWGYFDFNRFHCHFSPRDWQRLINNNWGFRPKR
LNFKLFNIQVKEVTQNEGTKTIANNLTSTIQVFTDSEYQLPYVLGSAHQGCLPPFPADVFMIPQY
GYLTLNNGSQAVGRSSFYCLEYFPSQMLRTGNNFEFSYNFEDVPFHSSYAHSQSLDRLMNPLIDQ
YLYYLSRTQSTGGTAGTQQLLFSQAGPNNMSAQAKNWLPGPCYRQQRVSTTLSQNNNSNFAW
TGATKYHLNGRDSLVNPGVAMATHKDDEERFFPSSGVLMFGKQGAGKDNVDYSSVMLTSEEEI
KTTNPVATEQYGVVADNLQQQNAAPIVGAVNSQGALPGMVWQNRDVYLQGPIWAKIPHTDGN
FHPSPLMGGFGLKHPPPQILIKNTPVPADPPTTFNQAKLASFITQYSTGQVSVEIEWELQKENSKR
WNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL.

Rh74 VP1 DNA (SEQ ID NO:2):
ATGGCTGCCGATGGTTATCTTCCAGATTGGCTCGAGGACAACCTCTCTGAGGGCATTCGCGA
GTGGTGGGACCTGAAACCTGGAGCCCCGAAACCCAAAGCCAACCAGCAAAAGCAGGACAA
CGGCCGGGGTCTGGTGCTTCCTGGCTACAAGTACCTCGGACCCTTCAACGGACTCGACAAGG
GGGAGCCCGTCAACGCGGCGGACGCAGCGGCCCTCGAGCACGACAAGGCCTACGACCAGC
AGCTCCAAGCGGGTGACAATCCGTACCTGCGGTATAATCACGCCGACGCCGAGTTTCAGGA
GCGTCTGCAAGAAGATACGTCTTTTGGGGGCAACCTCGGGCGCGCAGTCTTCCAGGCCAAA
AAGCGGGTTCTCGAACCTCTGGGCCTGGTTGAATCGCCGGTTAAGACGGCTCCTGGAAAGA
AGAGACCGGTAGAGCCATCACCCCAGCGCTCTCCAGACTCCTCTACGGGCATCGGCAAGAA
AGGCCAGCAGCCCGCAAAAAAGAGACTCAATTTTGGGCAGACTGGCGACTCAGAGTCAGTC
CCCGACCCTCAACCAATCGGAGAACCACCAGCAGGCCCCTCTGGTCTGGGATCTGGTACAA
TGGCTGCAGGCGGTGGCGCTCCAATGGCAGACAATAACGAAGGCGCCGACGGAGTGGGTA
GTTCCTCAGGAAATTGGCATTGCGATTCCACATGGCTGGGCGACAGAGTCATCACCACCAGC
ACCCGCACCTGGGCCCTGCCCACCTACAACAACCACCTCTACAAGCAAATCTCCAACGGGA
CCTCGGGAGGAAGCACCAACGACAACACCTACTTCGGCTACAGCACCCCCTGGGGGTATTT
TGACTTCAACAGATTCCACTGCCACTTTTCACCACGTGACTGGCAGCGACTCATCAACAACA
ACTGGGGATTCCGGCCCAAGAGGCTCAACTTCAAGCTCTTCAACATCCAAGTCAAGGAGGT
CACGCAGAATGAAGGCACCAAGACCATCGCCAATAACCTTACCAGCACGATTCAGGTCTTT
ACGGACTCGGAATACCAGCTCCCGTACGTGCTCGGCTCGGCGCACCAGGGCTGCCTGCCTCC
GTTCCCGGCGGACGTCTTCATGATTCCTCAGTACGGGTACCTGACTCTGAACAATGGCAGTC
AGGCTGTGGGCCGGTCGTCCTTCTACTGCCTGGAGTACTTTCCTTCTCAAATGCTGAGAACG
GGCAACAACTTTGAATTCAGCTACAACTTCGAGGACGTGCCCTTCCACAGCAGCTACGCGCA
CAGCCAGAGCCTGGACCGGCTGATGAACCCTCTCATCGACCAGTACTTGTACTACCTGTCCC
GGACTCAAAGCACGGGCGGTACTGCAGGAACTCAGCAGTTGCTATTTTCTCAGGCCGGGCC
TAACAACATGTCGGCTCAGGCCAAGAACTGGCTACCCGGTCCCTGCTACCGGCAGCAACGC
GTCTCCACGACACTGTCGCAGAACAACAACAGCAACTTTGCCTGGACGGGTGCCACCAAGT
ATCATCTGAATGGCAGAGACTCTCTGGTGAATCCTGGCGTTGCCATGGCTACCCACAAGGAC
GACGAAGAGCGATTTTTTCCATCCAGCGGAGTCTTAATGTTTGGGAAACAGGGAGCTGGAA
AAGACAACGTGGACTATAGCAGCGTGATGCTAACCAGCGAGGAAGAAATAAAGACCACCA
ACCCAGTGGCCACAGAACAGTACGGCGTGGTGGCCGATAACCTGCAACAGCAAAACGCCGC
TCCTATTGTAGGGGCCGTCAATAGTCAAGGAGCCTTACCTGGCATGGTGTGGCAGAACCGG
GACGTGTACCTGCAGGGTCCCATCTGGGCCAAGATTCCTCATACGGACGGCAACTTTCATCC
CTCGCCGCTGATGGGAGGCTTTGGACTGAAGCATCCGCCTCCTCAGATCCTGATTAAAAACA
CACCTGTTCCCGCGGATCCTCCGACCACCTTCAATCAGGCCAAGCTGGCTTCTTTCATCACG
CAGTACAGTACCGGCCAGGTCAGCGTGGAGATCGAGTGGGAGCTGCAGAAGGAGAACAGC
AAACGCTGGAACCCAGAGATTCAGTACACTTCCAACTACTACAAATCTACAAATGTGGACTT
TGCTGTCAATACTGAGGGTACTTATTCCGAGCCTCGCCCCATTGGCACCCGTTACCTCACCC
GTAATCTGTAA

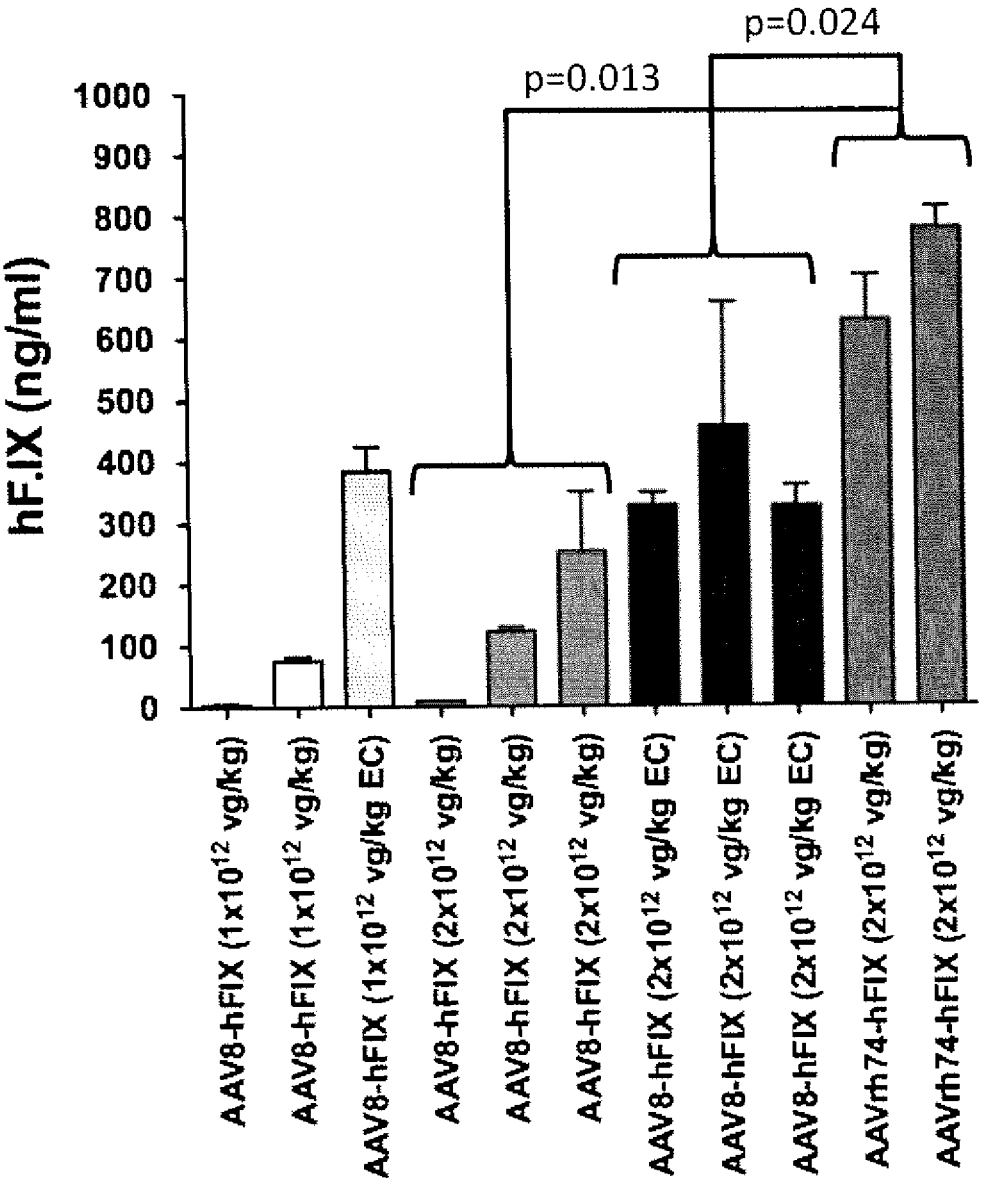
Rh74 VP2 Amino Acid (SEQ ID NO:3):

TAPGKKRPVEPSPQRSPDSSTGIGKKGQQPAKKRLNFGQTGDSESVPDPQPIGEPPAGPSGLGSGTMAAGGGAPMAD
NNEGADGVGSSSGNWHCDSTWLGDRVITTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGYSTPWGYFDFNRFH
CHFSPRDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNEGTKTIANNLTSTIQVFTDSEYQLPYVLGSAHQGCLPPF
PADVFMIPQYGYLTLNNGSQAVGRSSFYCLEYFPSQMLRTGNNFEFSYNFEDVPFHSSYAHSQSLDRLMNPLIDQYL
YYLSRTQSTGGTAGTQQLLFSQAGPNNMSAQAKNWLPGPCYRQQRVSTTLSQNNNSNFAWTGATKYHLNGRDSLVNP
GVAMATHKDDEERFFPSSGVLMFGKQGAGKDNVDYSSVMLTSEEEIKTTNPVATEQYGVVADNLQQQNAAPIVGAVN
SQGALPGMVWQNRDVYLQGPIWAKIPHTDGNFHPSPLMGGFGLKHPPPQILIKNTPVPADPPTTFNQAKLASFITQY
STGQVSVEIEWELQKENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL

Rh74 VP3 Amino Acid (SEQ ID NO:4):

MAAGGGAPMADNNEGADGVGSSSGNWHCDSTWLGDRVITTSTRTWALPTYNNHLYKQISNGTSGGSTNDNTYFGYST
PWGYFDFNRFHCHFSPRDWQRLINNNWGFRPKRLNFKLFNIQVKEVTQNEGTKTIANNLTSTIQVFTDSEYQLPYVL
GSAHQGCLPPFPADVFMIPQYGYLTLNNGSQAVGRSSFYCLEYFPSQMLRTGNNFEFSYNFEDVPFHSSYAHSQSLD
RLMNPLIDQYLYYLSRTQSTGGTAGTQQLLFSQAGPNNMSAQAKNWLPGPCYRQQRVSTTLSQNNNSNFAWTGATKY
HLNGRDSLVNPGVAMATHKDDEERFFPSSGVLMFGKQGAGKDNVDYSSVMLTSEEEIKTTNPVATEQYGVVADNLQQ
QNAAPIVGAVNSQGALPGMVWQNRDVYLQGPIWAKIPHTDGNFHPSPLMGGFGLKHPPPQILIKNTPVPADPPTTFN
QAKLASFITQYSTGQVSVEIEWELQKENSKRWNPEIQYTSNYYKSTNVDFAVNTEGTYSEPRPIGTRYLTRNL

Figure 4


p=0.024
p=0.013
hF.IX (ng/ml)
1000
900
800
700
600
500
400
300
200
100
0
AAV8-hFIX (1x10^12 vg/kg)
AAV8-hFIX (1x10^12 vg/kg)
AAV8-hFIX (1x10^12 vg/kg EC)
AAV8-hFIX (2x10^12 vg/kg)
AAV8-hFIX (2x10^12 vg/kg)
AAV8-hFIX (2x10^12 vg/kg)
AAV8-hFIX (2x10^12 vg/kg EC)
AAV8-hFIX (2x10^12 vg/kg EC)
AAV8-hFIX (2x10^12 vg/kg EC)
AAVrh74-hFIX (2x10^12 vg/kg)
AAVrh74-hFIX (2x10^12 vg/kg)