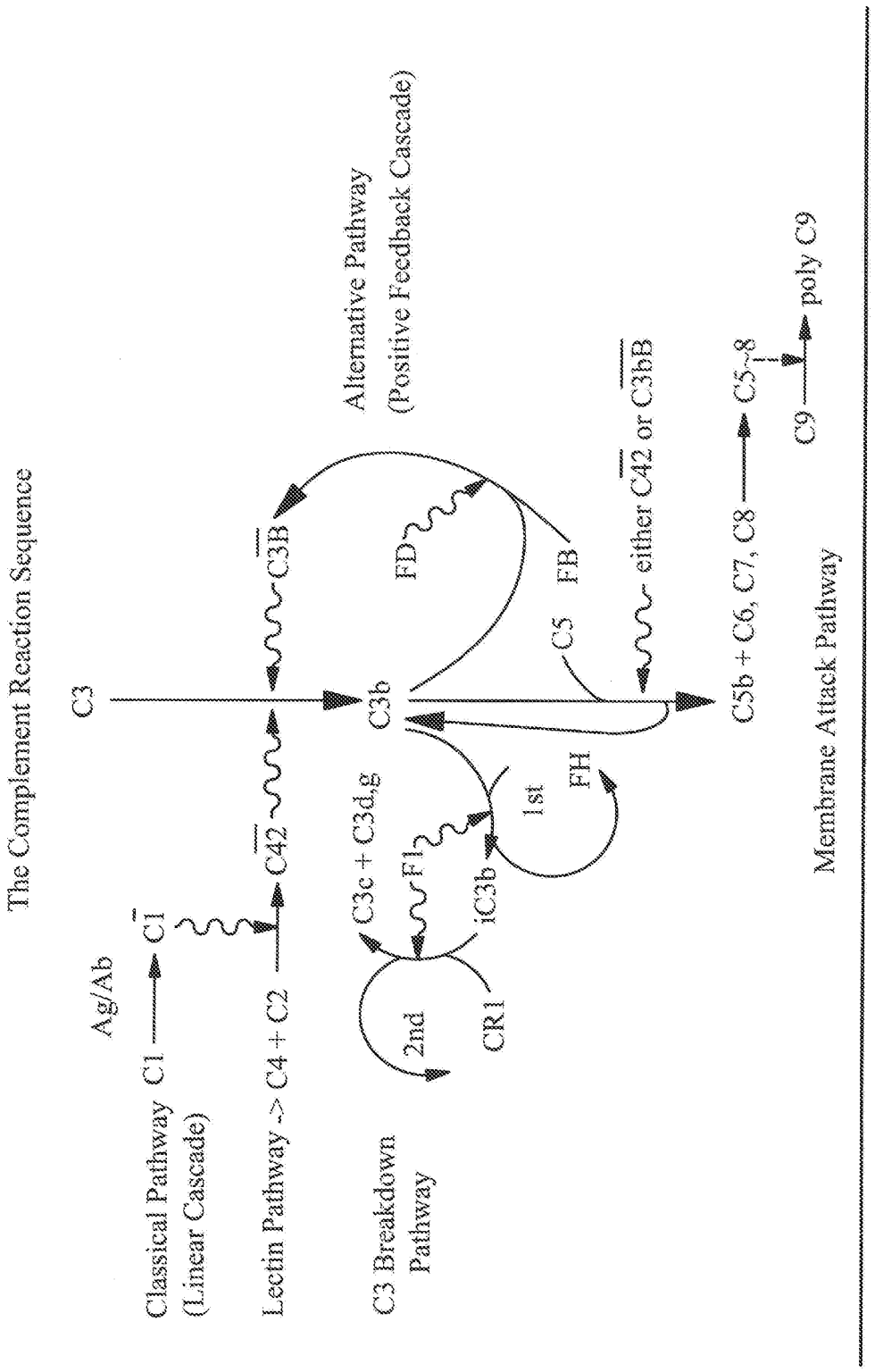
The Complement Reaction Sequence
Classical Pathway (Linear Cascade)
Ag/Ab
C1
C1
Lectin Pathway -> C4 + C2
C42
C3
C3B
Alternative Pathway (Positive Feedback Cascade)
C3 Breakdown Pathway
2nd
C3c + C3d,g
CR1
iC3b
FI
C3b
FD
FB
C5
1st
FH
either C42 or C3bB
C5b + C6, C7, C8
C5-8
C9
poly C9
Membrane Attack Pathway

Figure 1

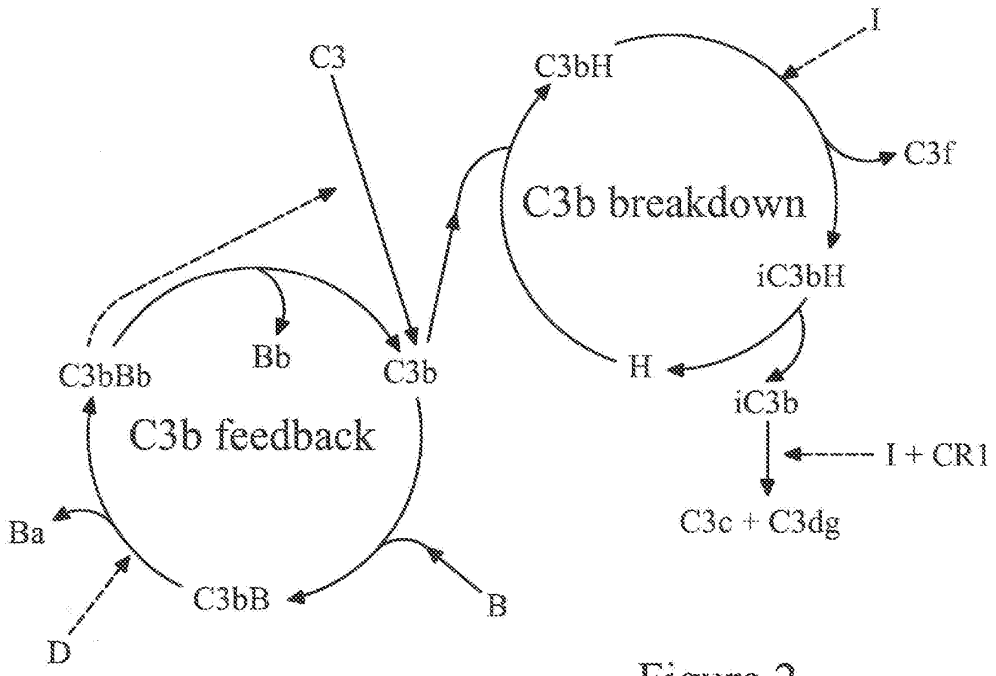

Figure 2

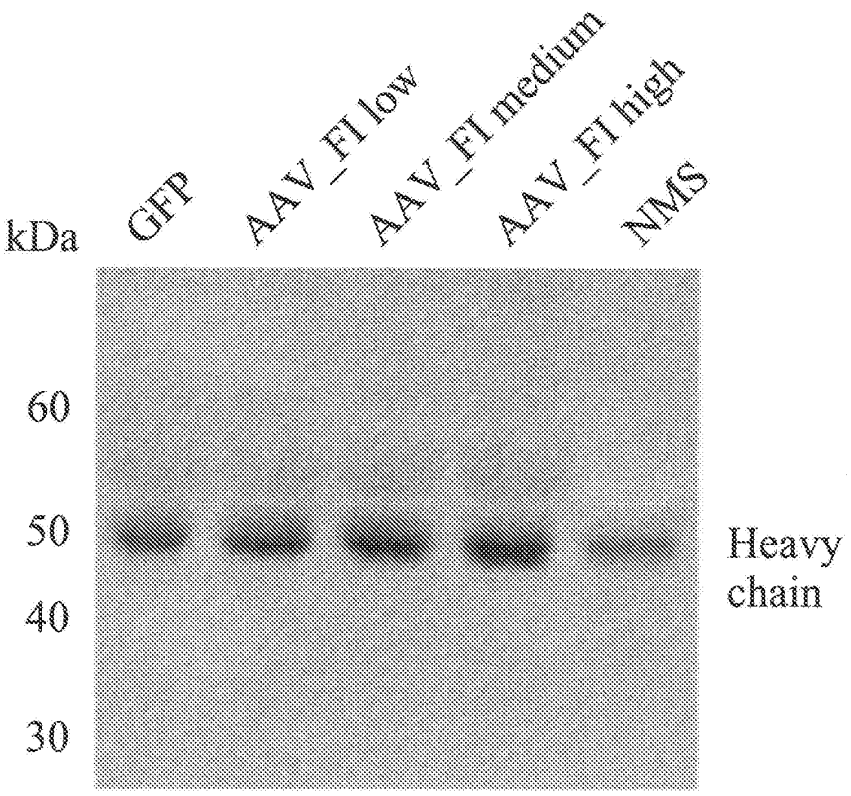

Figure 6

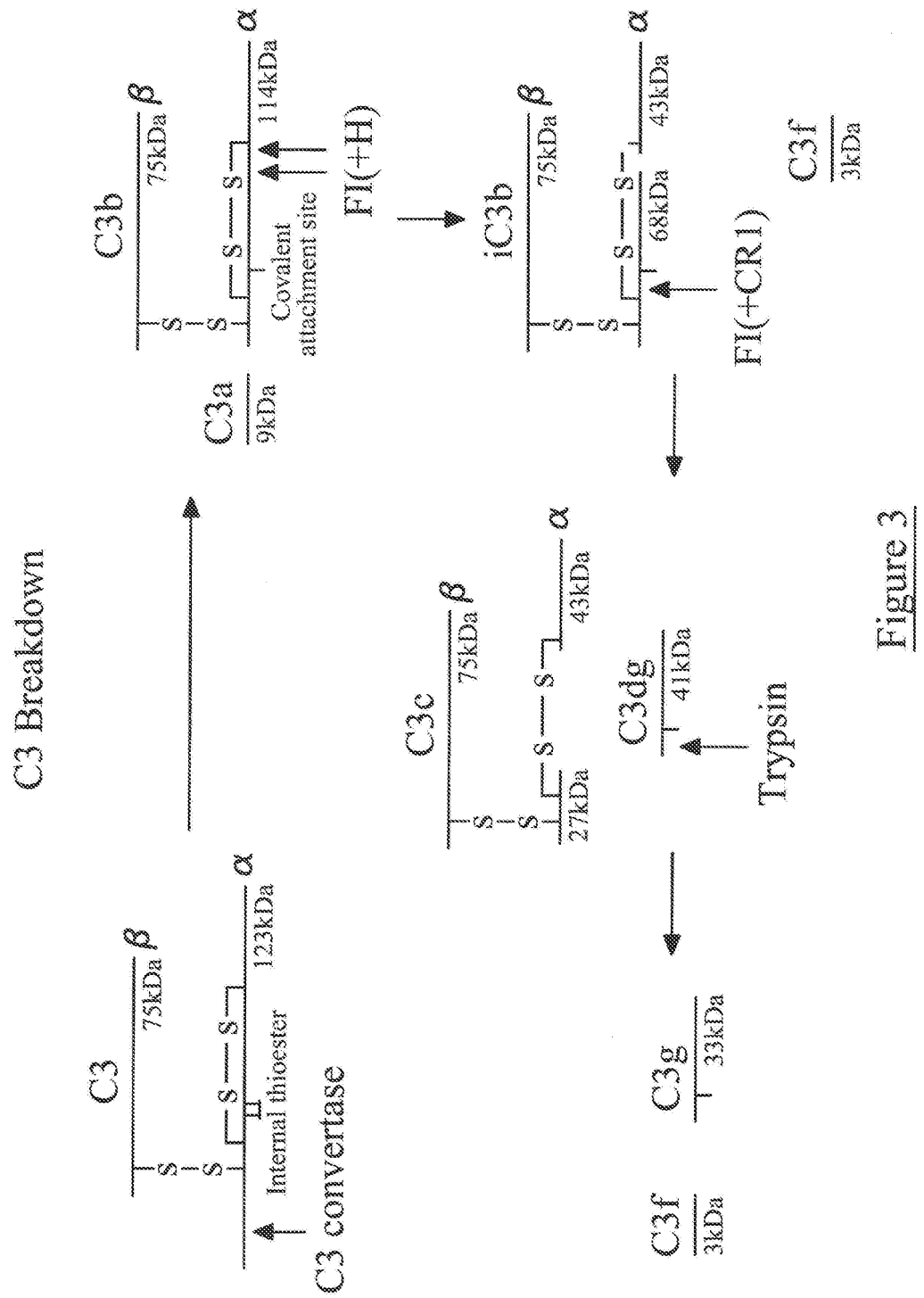
C3 Breakdown
C3
75kDa β
S
S
S—S
Internal thioester
123kDa α
C3 convertase
C3b
75kDa β
S
S
S—S
Covalent attachment site
114kDa α
C3a
9kDa
FI(+H)
iC3b
75kDa β
S
S
S—S
68kDa
43kDa α
FI(+CR1)
C3f
3kDa
C3c
75kDa β
S
S
S—S
27kDa
43kDa α
C3dg
41kDa
Trypsin
C3f
3kDa
C3g
33kDa

Figure 3

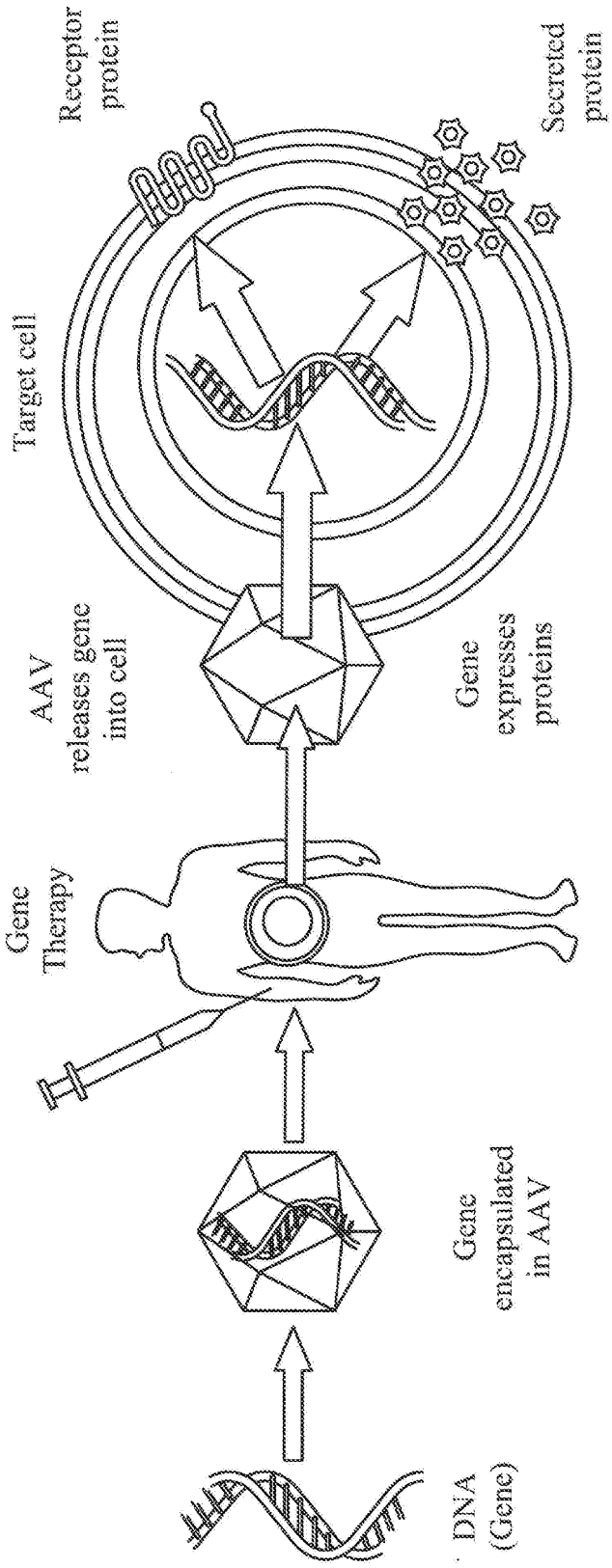
Recceptor protein
Secreted protein
Target cell
AAV releases gene into cell
Gene expresses proteins
Gene Therapy
Gene encapsulated in AAV
DNA (Gene)

Figure 4

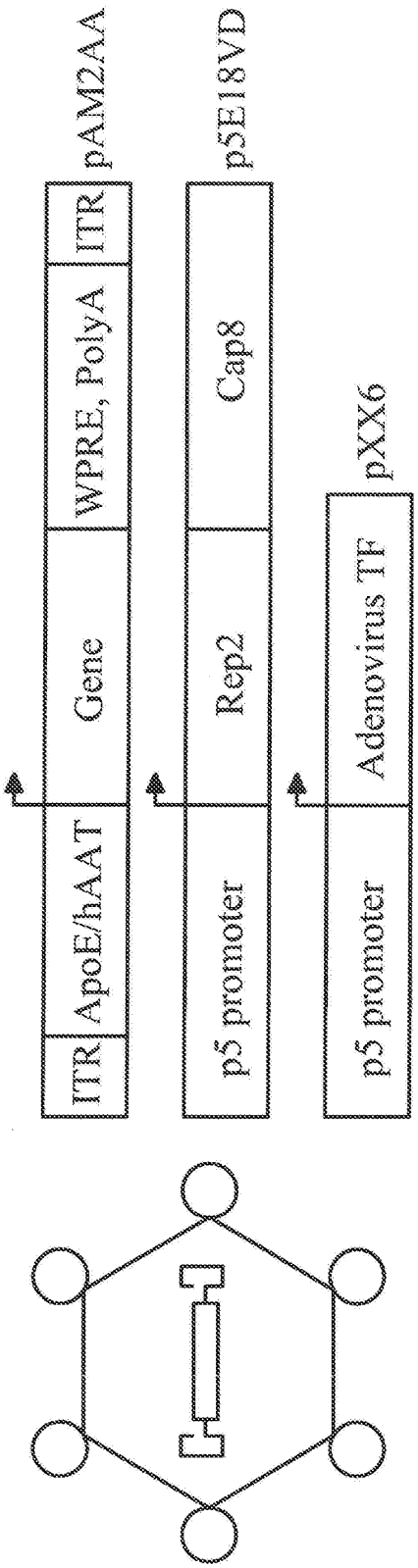
pAM2AA
ITR
WPRE, PolyA
Gene
ApoE/hAAT
ITR
p5E18VD
Cap8
Rep2
p5 promoter
pXX6
Adenovirus TF
p5 promoter

Figure 5

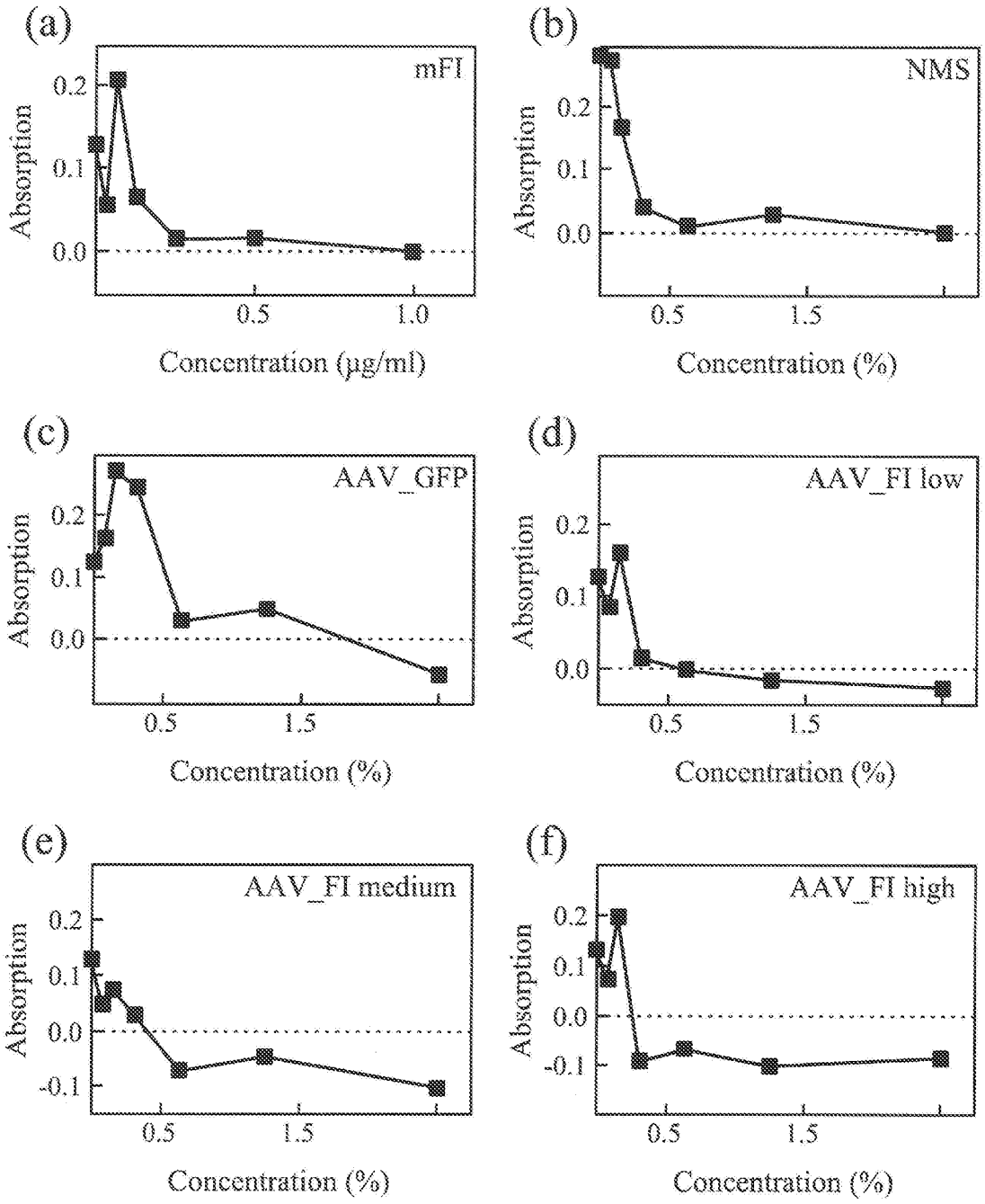
(a)
mFI
Absorption
0.2
0.1
0.0
0.5
1.0
Concentration (μg/ml)
(b)
NMS
Absorption
0.2
0.1
0.0
0.5
1.5
Concentration (%)
(c)
AAV_GFP
Absorption
0.2
0.1
0.0
0.5
1.5
Concentration (%)
(d)
AAV_FI low
Absorption
0.2
0.1
0.0
0.5
1.5
Concentration (%)
(e)
AAV_FI medium
Absorption
0.2
0.1
0.0
-0.1
0.5
1.5
Concentration (%)
(f)
AAV_FI high
Absorption
0.2
0.1
0.0
-0.1
0.5
1.5
Concentration (%)

Figure 7

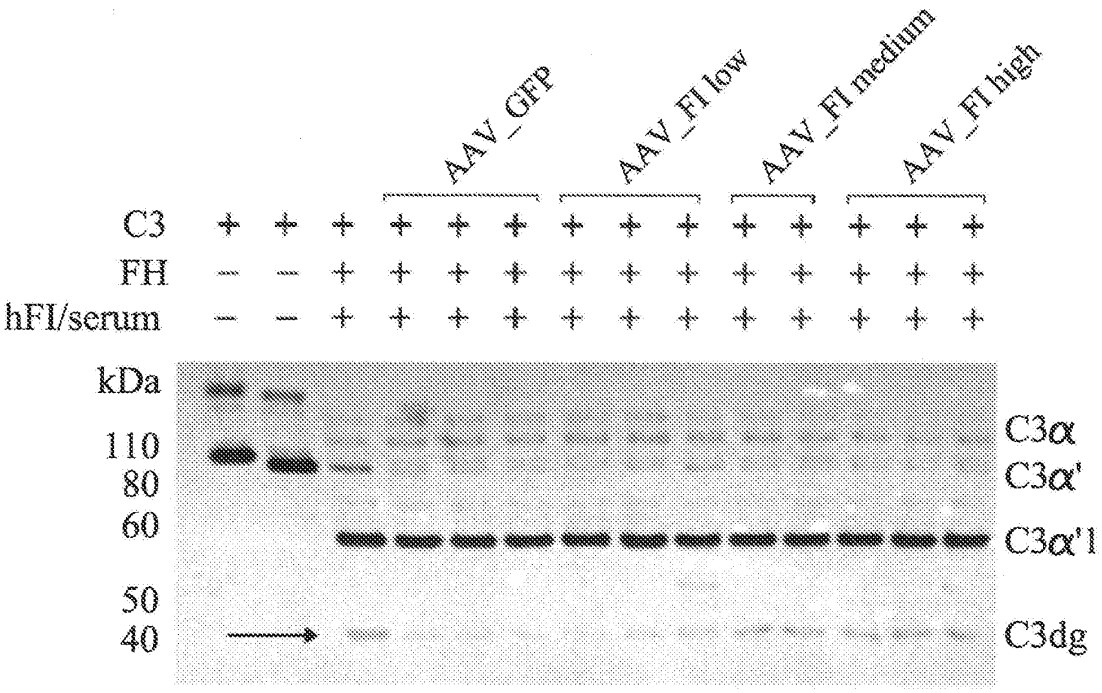

Figure 8

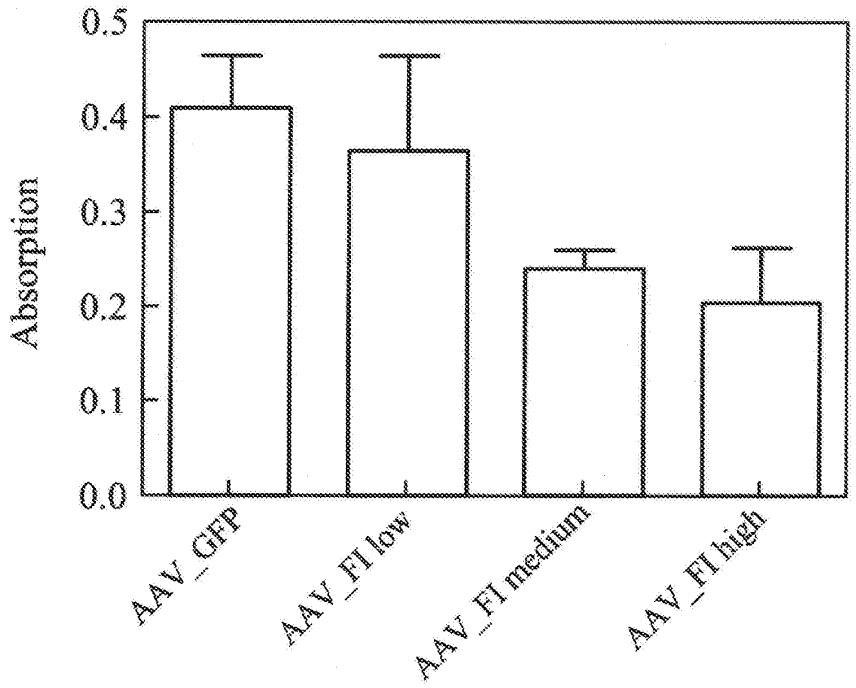

Figure 9