FIGURE 1

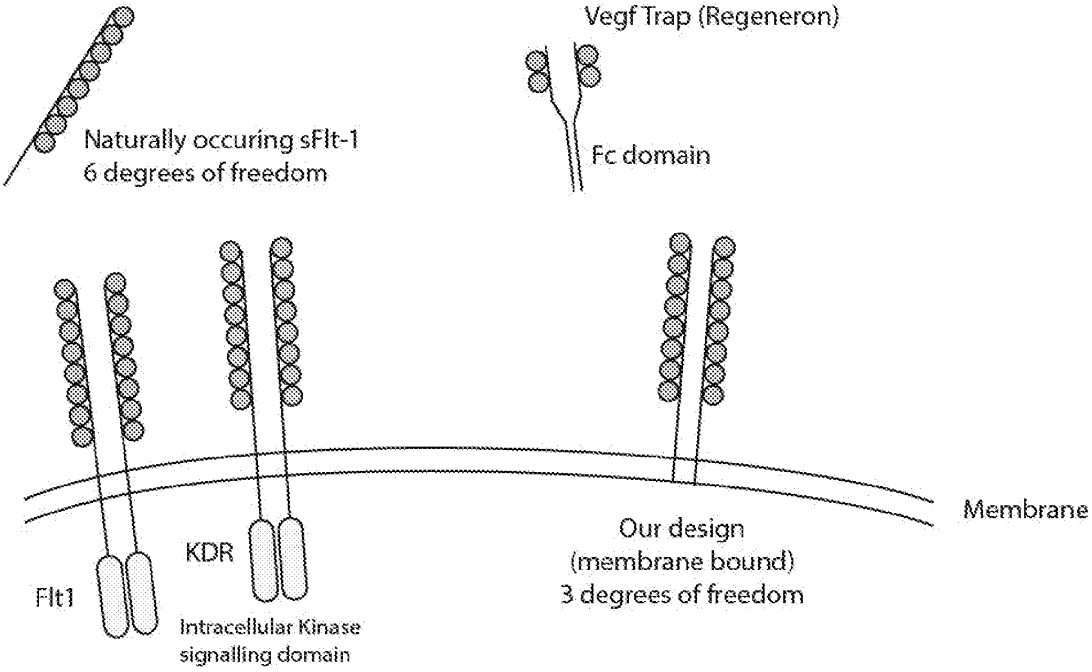

Vegf Trap (Regeneron)
Naturally occuring sFlt-1
6 degrees of freedom
Fc domain
Membrane
KDR
Flt1
Our design
(membrane bound)
3 degrees of freedom
Intracellular Kinase
signalling domain

FIGURE 2A

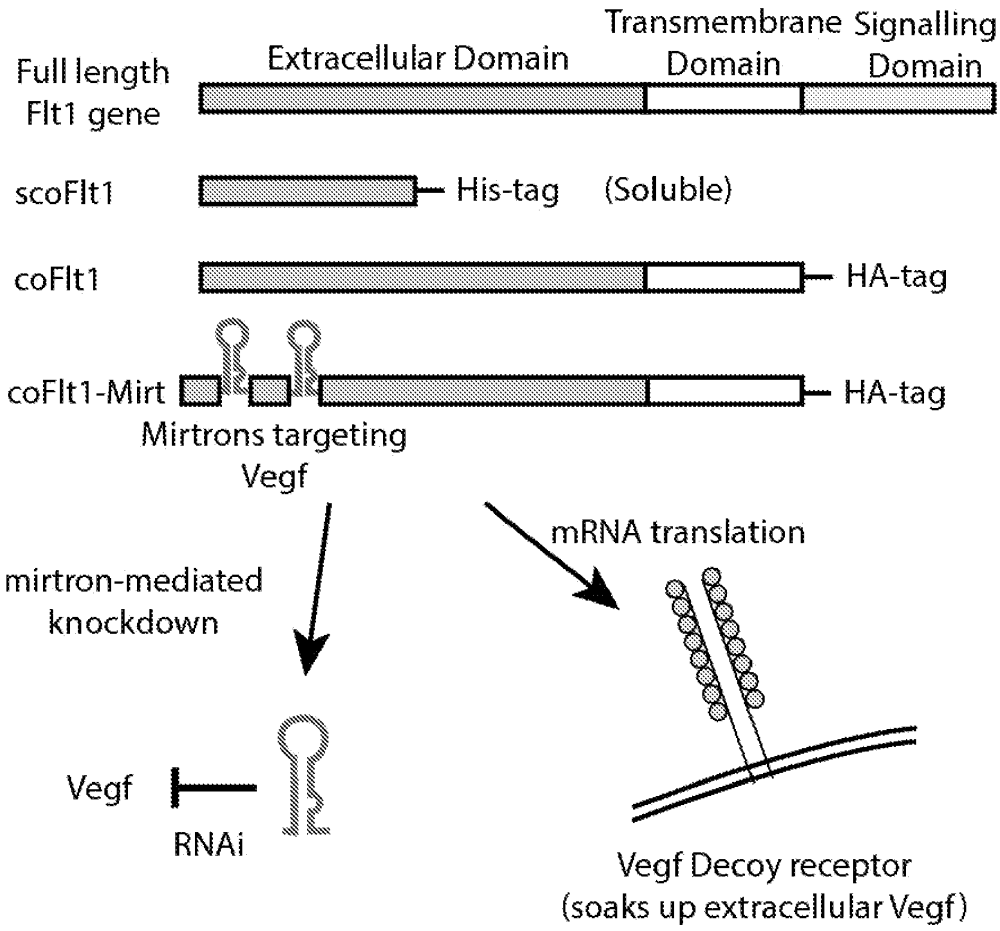

Full length Flt1 gene
Extracellular Domain
Transmembrane Domain
Signalling Domain
scoFlt1
His-tag
(Soluble)
coFlt1
HA-tag
coFlt1-Mirt
HA-tag
Mirtrons targeting Vegf
mirtron-mediated knockdown
mRNA translation
Vegf
RNAi
Vegf Decoy receptor
(soaks up extracellular Vegf)

FIGURE 2B

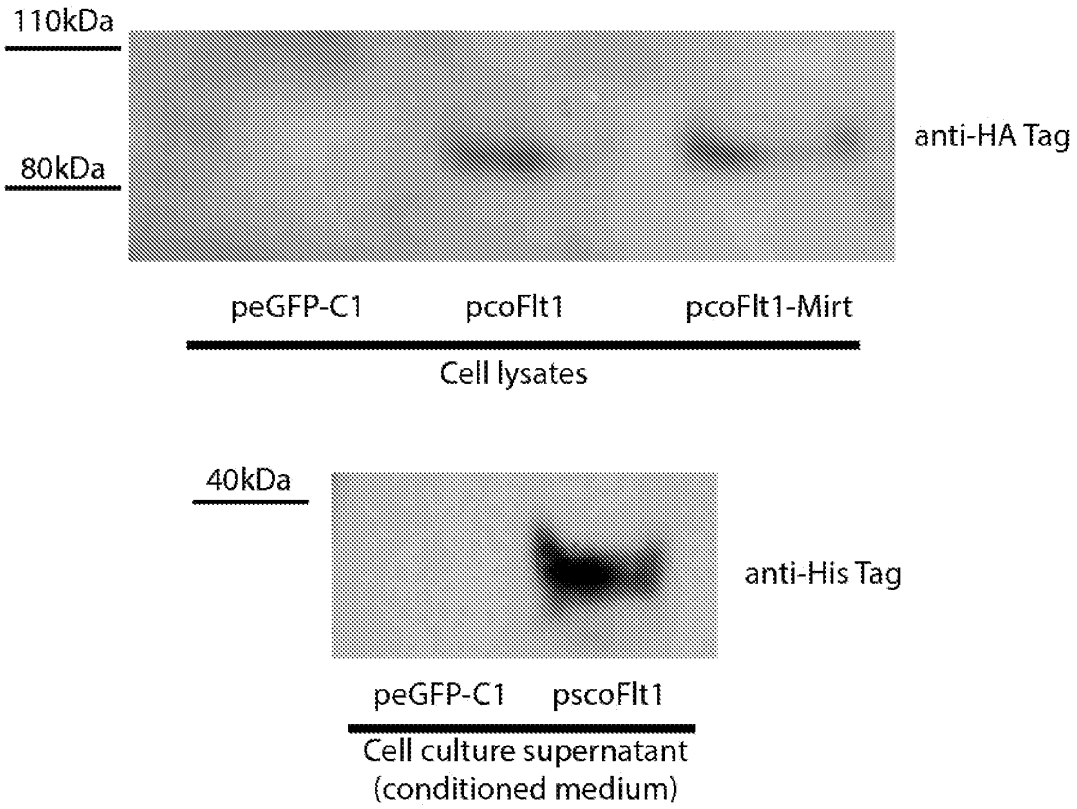

110kDa
80kDa
anti-HA Tag
peGFP-C1
pcoFlt1
pcoFlt1-Mirt
Cell lysates
40kDa
anti-His Tag
peGFP-C1
pscoFlt1
Cell culture supernatant
(conditioned medium)

FIGURE 2C

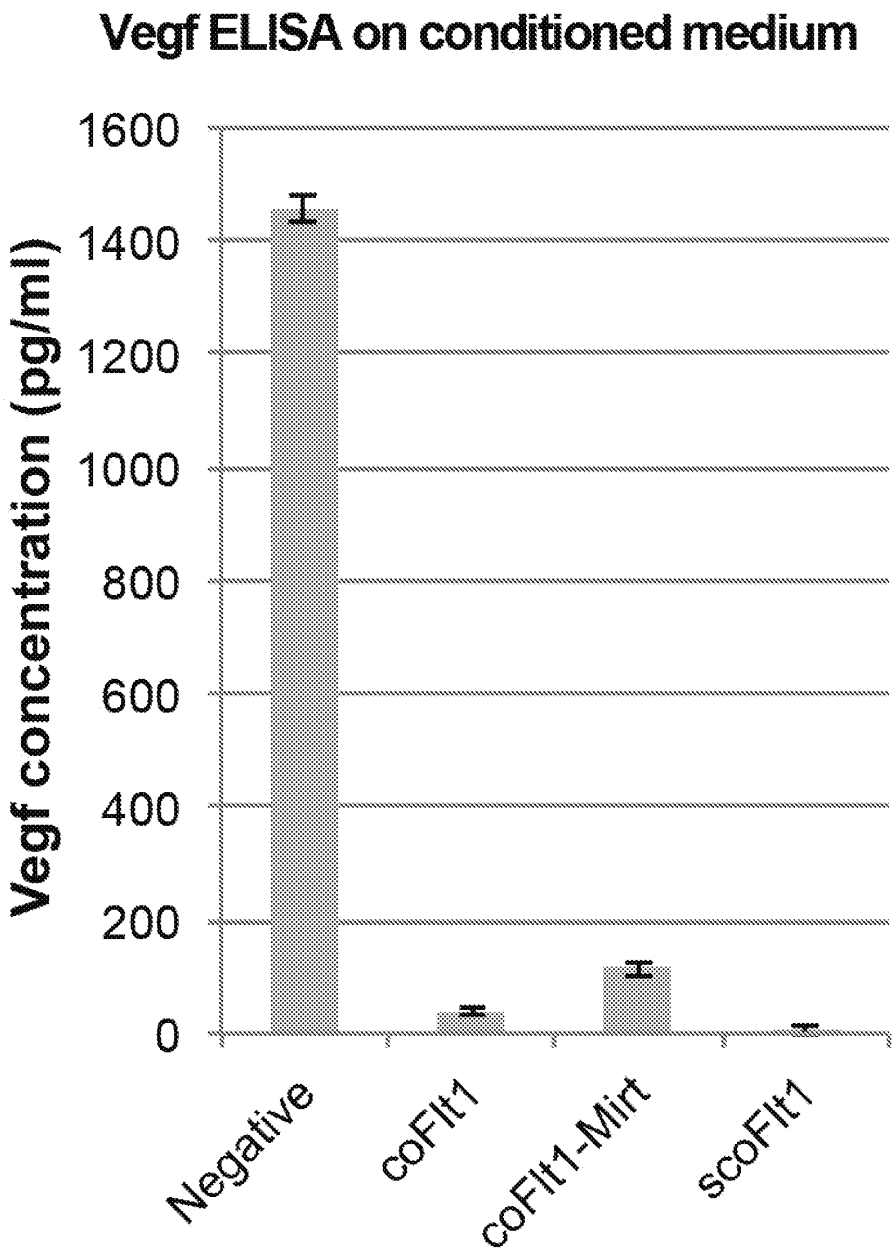

Vegf ELISA on conditioned medium
Vegf concentration (pg/ml)
1600
1400
1200
1000
800
600
400
200
0
Negative
coFlt1
coFlt1-Mirt
scoFlt1

FIGURE 2D

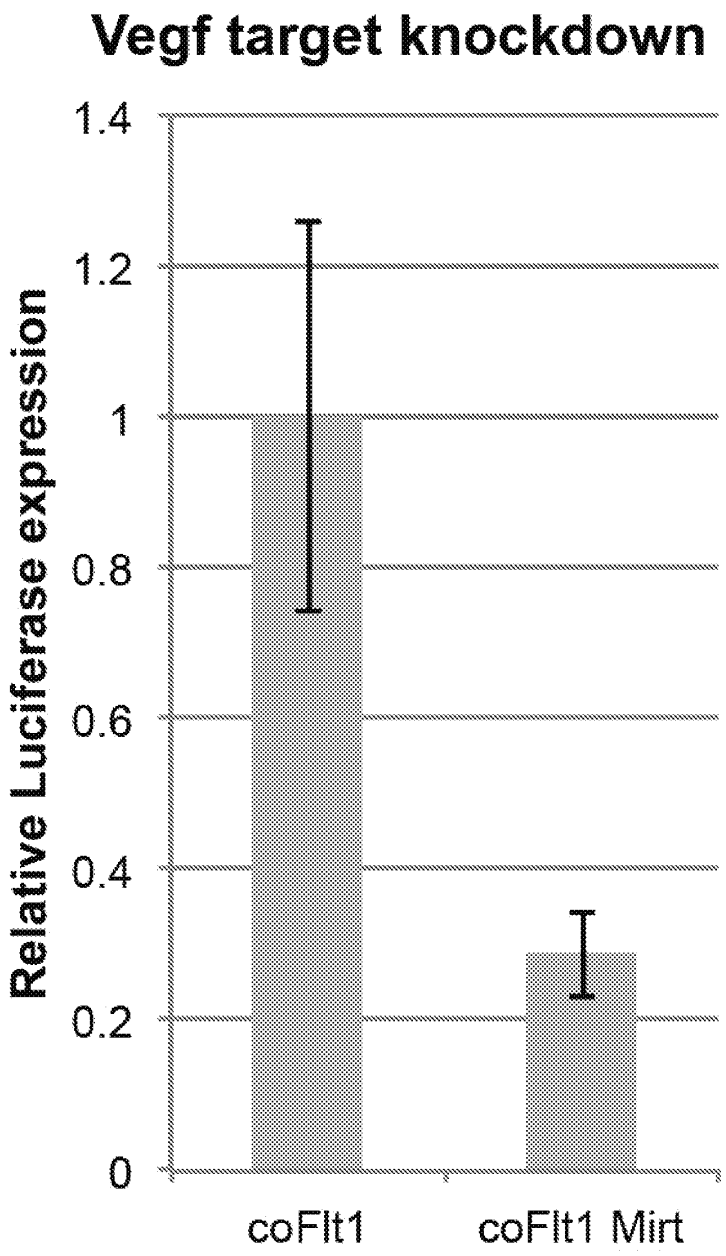
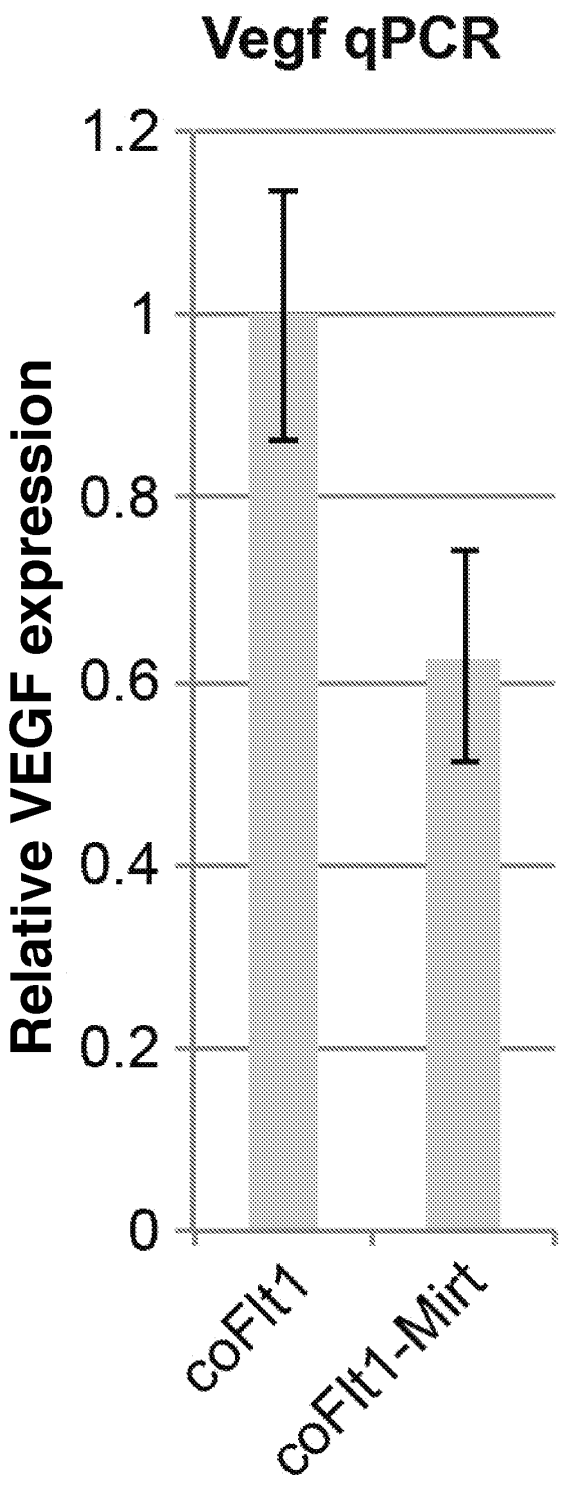

Vegf target knockdown
Relative Luciferase expression
1.4
1.2
1
0.8
0.6
0.4
0.2
0
coFlt1
coFlt1 Mirt

FIGURE 2E


Vegf qPCR
Relative VEGF expression
1.2
1
0.8
0.6
0.4
0.2
0
coFlt1
coFlt1-Mirt