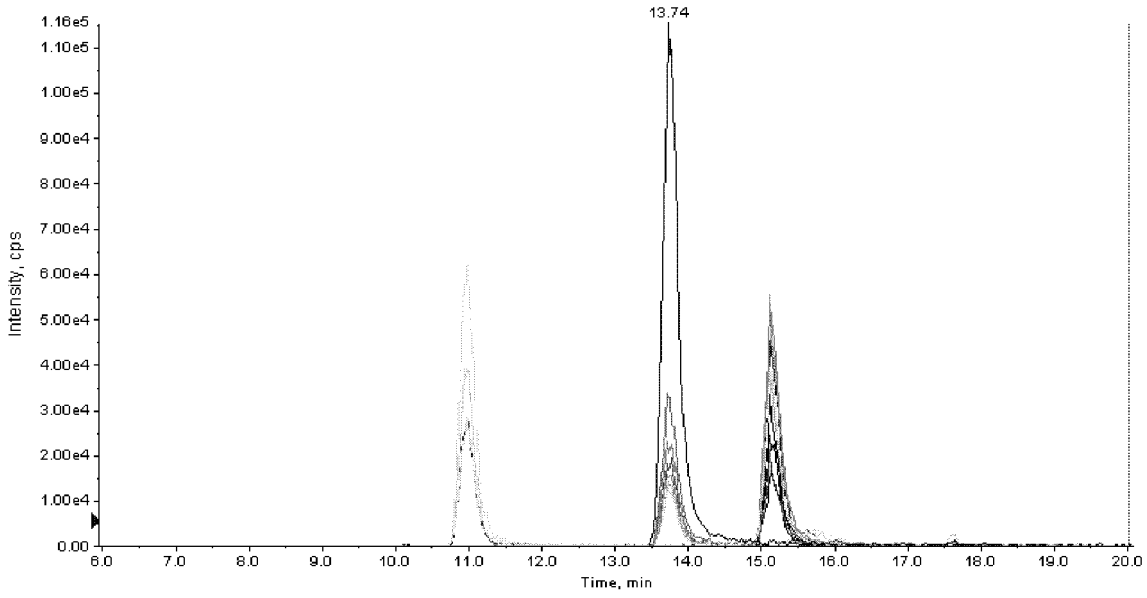
Figure 1 - p75NTR extracellular domain sequence, neurotrophin binding domains highlighted in bold

```
  1  MGAGATGRAM DGPRLLLLLL LGVSLGGAKE ACPTGLYTHS GECCKACNLG
 51  EGVAQPCGAN QTVCEPCLDS VTFSDVVSAT EPCKPCTECV GLQSMSAPCV
101  EADDAVCRCA YGYYQDETTG RCEACRVCEA GSGLVFSCQD KQNTVCEECP
151  DGTYSDEANH VDPCLPCTVC EDTERQLREC TRWADAECEE IPGRWITRST
201  PPEGSDSTAP STQEPEAPPE QDLIASTVAG VVTTVMGSSQ PVVTRGTTDN
251  LIPVYCSILA AVVVGLVAYI AFKRWNSCKQ NKQGANSRPV NQTPPPEGEK
301  LHSDSGISVD SQSLHDQQPH TQTASGQALK GDGGLYSSLP PAKREEVEKL
351  LNGSAGDTWR HLAGELGYQP EHIDSFTHEA CPVRALLASW ATQDSATLDA
401  LLAALRRIQR ADLVESLCSE STATSPV
```

Figure 2 [a] - Peptides identified by LCMS / MSof a p75NTR-Fc chimera, standard digest

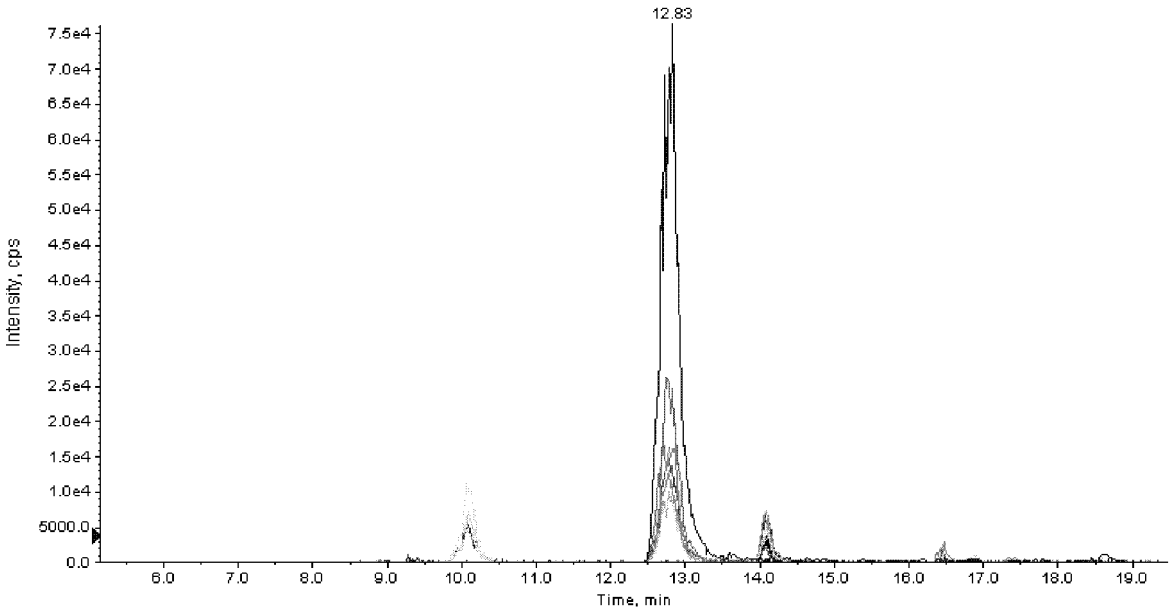
[a] Detection of p75NTR extracellular domain standard



Peak at 11.0 min = CAYGYYQDETTGR
Peak at 13.74 min = WADAECEEIPGR
Peak at 15.2 min = VCEAGSGLVFSCQDK

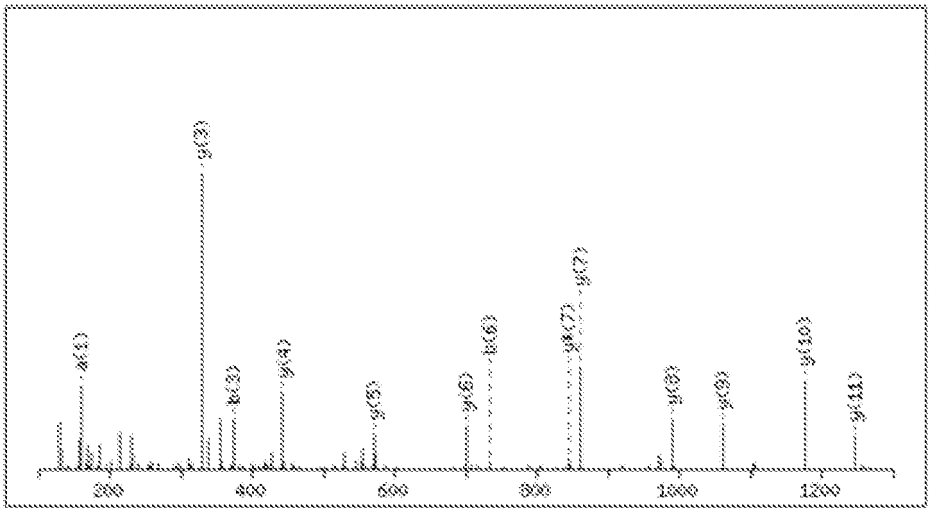
Figure 2 [b] - Peptides identified by LCMS / MSof a p75NTR-Fc chimera, standard digest

[b] Detection of p75 extracellular domain from total NGF assay using commercial human serum



Peak at 10.0 min = CAYGYYQDETTGR
Peak at 12.83 min = WADAECEEIPGR
Peak at 14.2 min = VCEAGSGLVFSCQDK

Figure 3. MS/MS sequence confirmation of the WADAECEEIPGR peak shown in Figure 2.



Monoisotopic mass of neutral peptide Mr(calc): 1431.61
Fixed modifications: Carbamidomethyl (C)
Ions Score: 94 **Expect:** 6.4e-007
Matches (Bold Red): 13/88 fragment ions using 14 most intense peaks

#	a	a**	b	b**	Seq.	y	y**	y*	y***	#
1	159.09	80.05	187.09	94.05	W					12
2	230.13	115.57	258.12	129.57	A	1246.54	623.77	1229.51	615.26	11
3	345.16	173.08	373.15	187.08	D	1175.50	588.25	1158.47	579.74	10
4	416.19	208.60	444.19	222.60	A	1060.47	530.74	1043.45	522.23	9
5	545.24	273.12	573.23	287.12	E	989.44	495.22	972.41	486.71	8
6	705.27	353.14	733.26	367.13	C	860.39	430.70	843.37	422.19	7
7	834.31	417.66	862.30	431.66	E	700.36	350.68	683.34	342.17	6
8	963.35	482.18	991.35	496.18	E	571.32	286.16	554.29	277.65	5
9	1076.44	538.72	1104.43	552.72	I	442.28	221.64	425.25	213.13	4
10	1173.49	587.25	1201.48	601.25	P	329.19	165.10	312.17	156.59	3
11	1230.51	615.76	1258.50	629.76	G	232.14	116.57	215.11	108.06	2
12					R	175.12	88.06	158.09	79.55	1

Figure 4 - p75NTR(NBP) inhibits NGF function in U20S cell line expressing TrkA and in U20S cell line co-expressing TrkA and p75NTR.

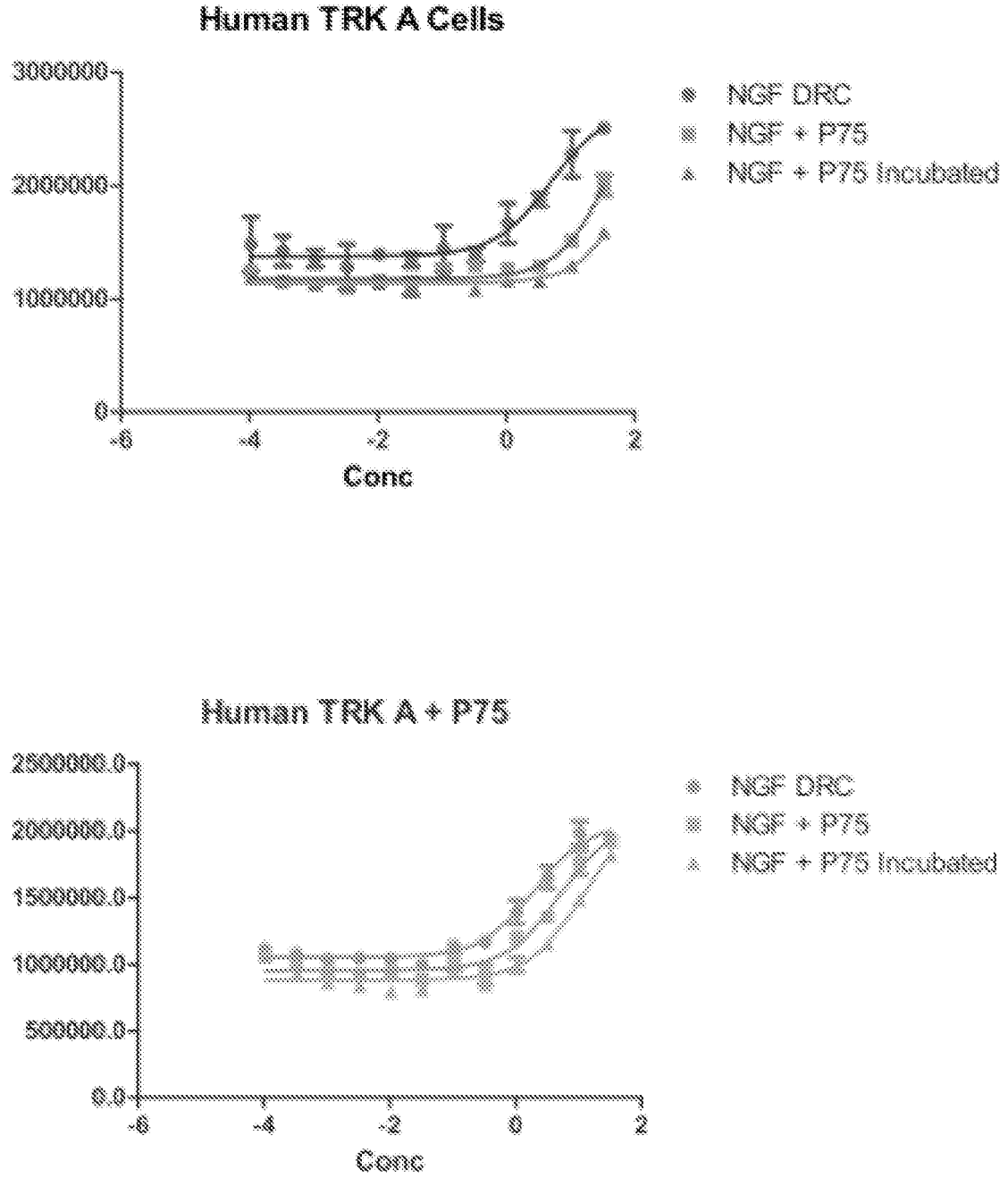


Figure 5 - Soluble p75NTR(NBP) inhibits BDNF function in U20S cell line expressing TrkA and in U20S cell line co-expressing TrkA and p75NTR.

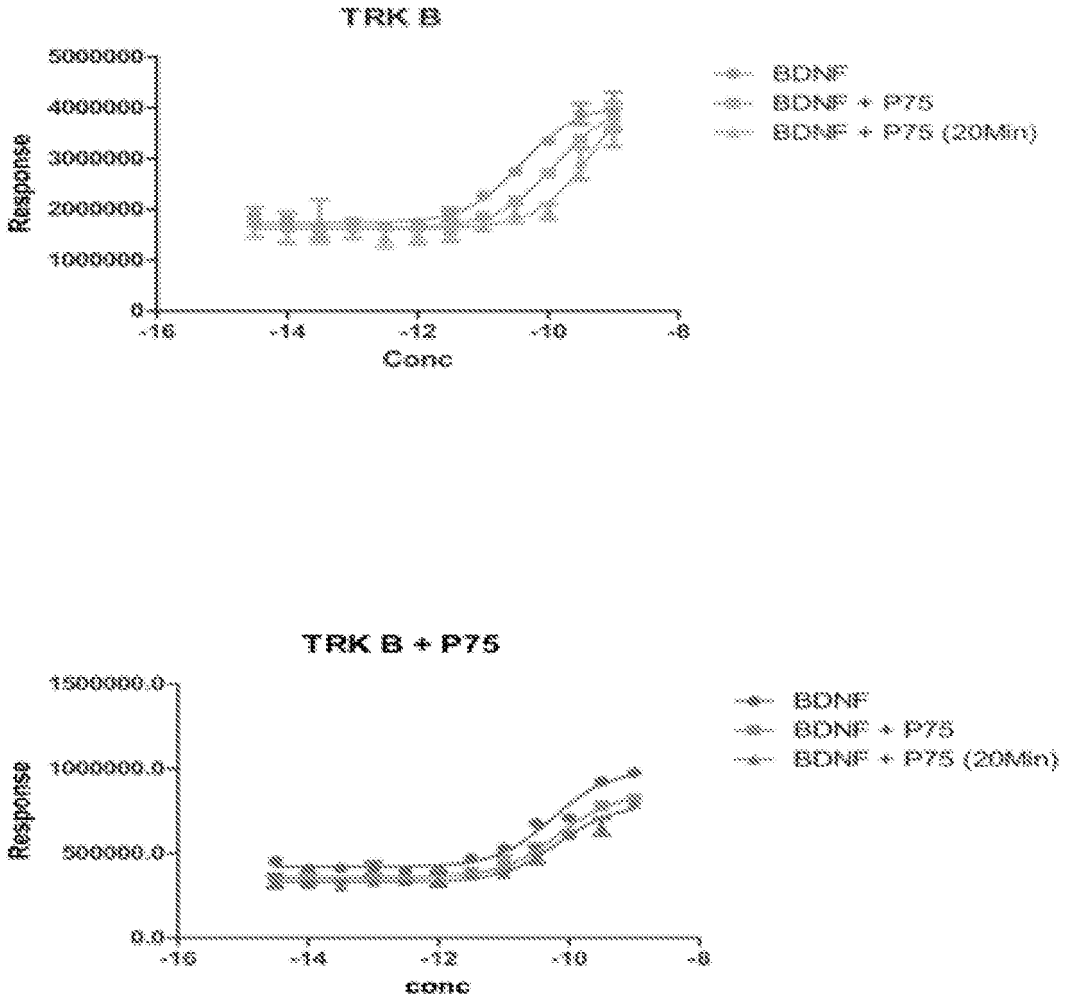


Figure 6 - Biocore data demonstrating p75NTR(NBP) binding to BDNF and competition between anti-BDNF and p75NTR(NBP)

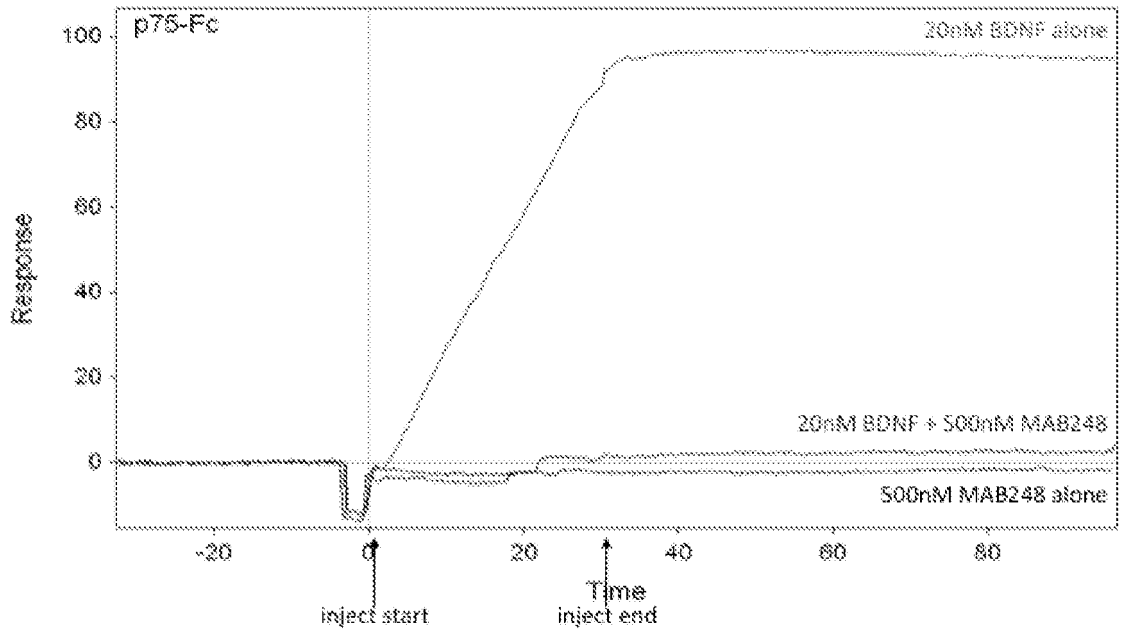


Figure 7– p75NTR(NBP) inhibition of NGF activity in PC12 cells

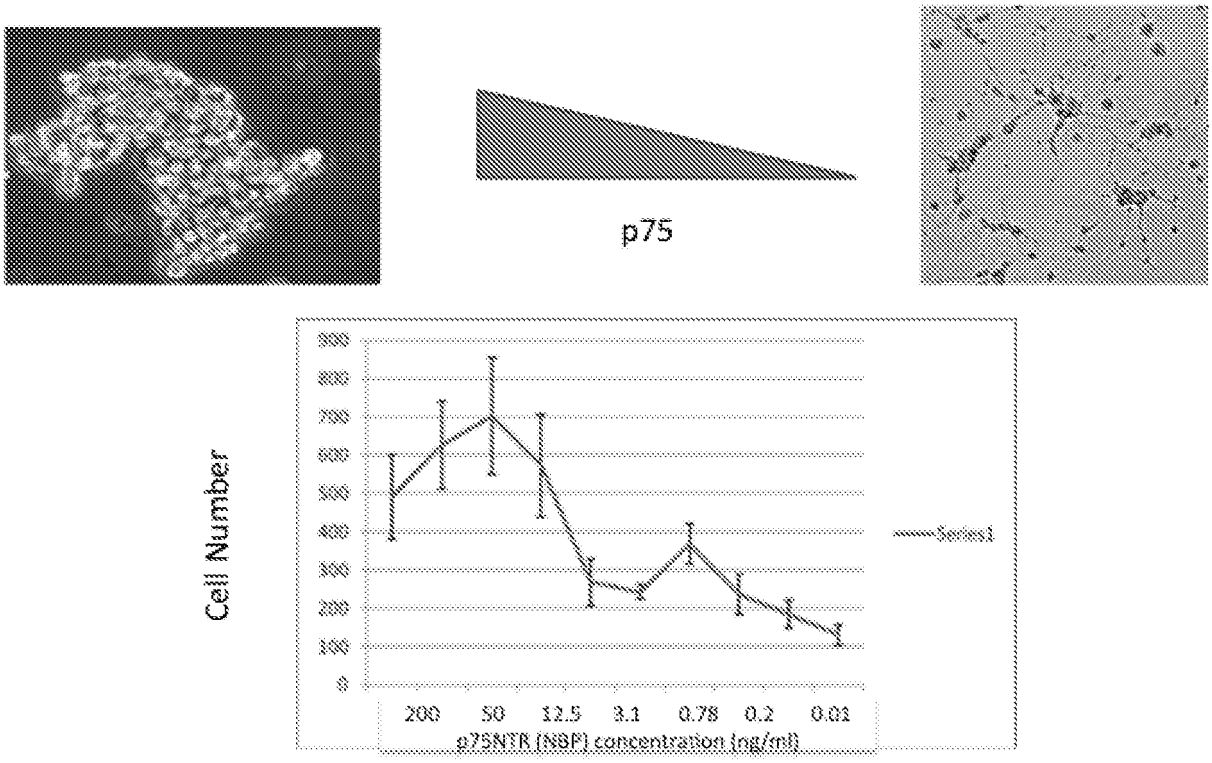
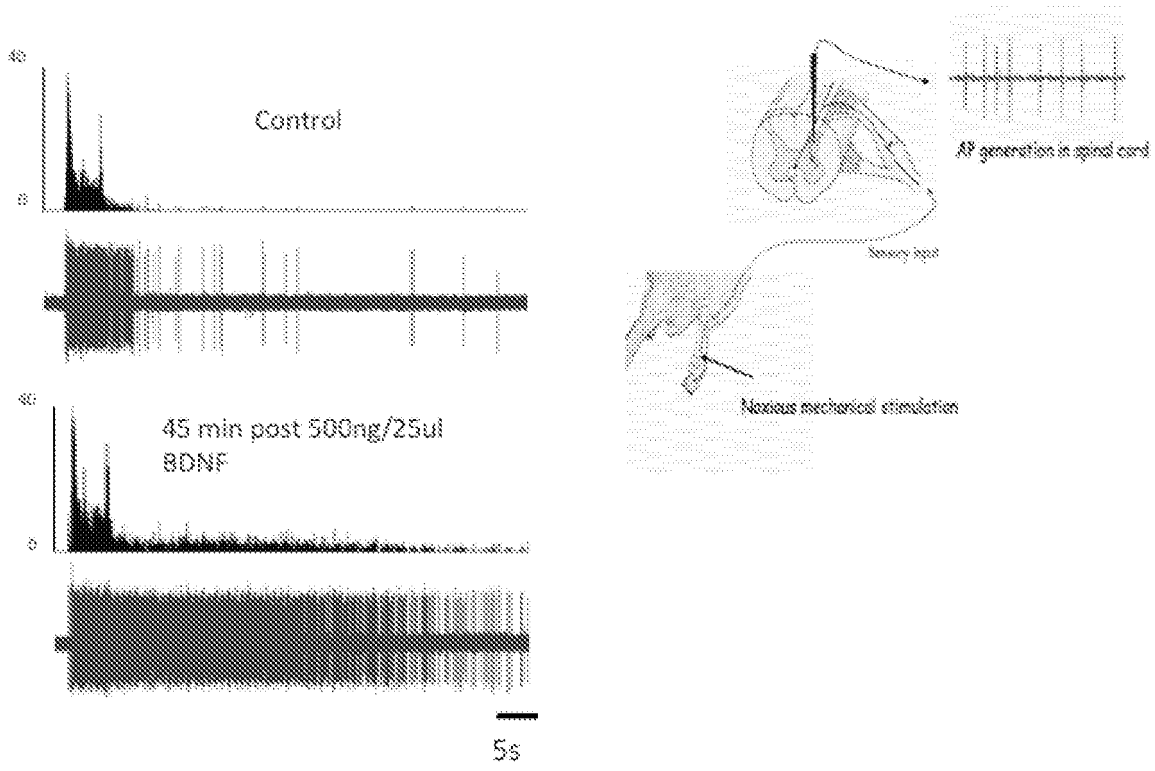


Figure 8 - p75NTR(NBP) inhibits BDNF pain effect in a model of nerve excitability



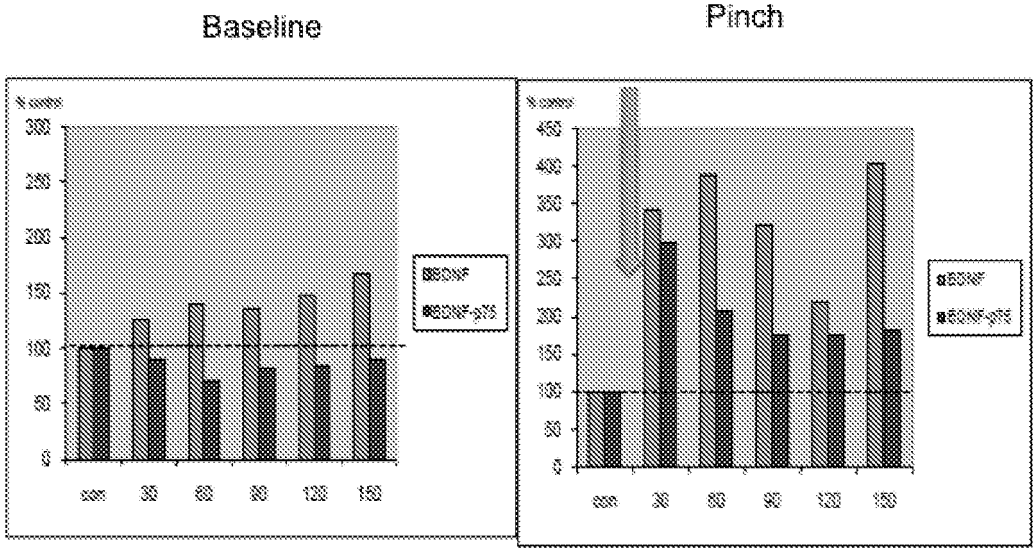


Figure 9 - Neurotrophin Binding Protein p75NTR(NBP) inhibits hyperalgesia in UVIH model

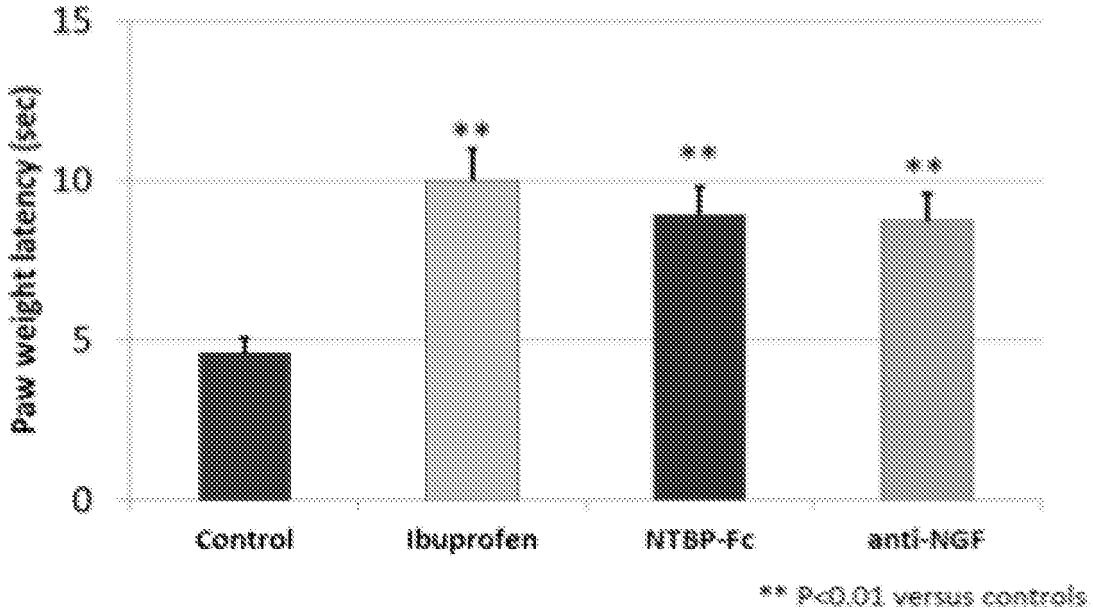


Figure 10 – SEQ ID NO. 1 Human p75NTR full amino acid sequence

```
1   mgagatgram dgprllllll lgvslggake acptglyths gecckacnlg egvaqpcgan
61  qtvcepclds vtfsdvvsat epckpctecv glqsmsapcv eaddavcrca ygyyqdettg
121 rceacrvcea gsglvfscqd kqntvceecp dgtysdeanh vdpclpctvc edterqlrec
181 trwadaecee ipgrwitrst ppegsdstap stqepeappe qdliastvag vvttvmgssq
241 pvvtrgttdn lipvycsila avvvglvayi afkrwnsckq nkqgansrpv nqtpppegek
301 lhsdsgisvd sqslhdqqph tqtasgqalk gdgglysslp pakreevekl lngsagdtwr
361 hlagelgyqp ehidsfthea cpvrallasw atqdsatlda llaalrriqr adlveslcse
421 statspv
```

Figure 11 - SEQ ID NO. 2 Human p75NTR extracellular domain including signal sequence

```
1   mgagatgram dgprllllll lgvslggake acptglyths gecckacnlg egvaqpcgan
61  qtvcepclds vtfsdvvsat epckpctecv glqsmsapcv eaddavcrca ygyyqdettg
121 rceacrvcea gsglvfscqd kqntvceecp dgtysdeanh vdpclpctvc edterqlrec
181 trwadaecee ipgrwitrst ppegsdstap stqepeappe qdliastvag vvttvmgssq
241 pvvtrgttdn
```

Figure 12 - SEQ ID NO. 3 Human p75NTR extracellular domain without signal sequence

ke acptglyths gecckacnlg egvaqpcgan qtvcepclds vtfsdvvsat epckpctecv glqsmsapcv eaddavcr**ca ygyyqdettg r**ceacr**vcea gsglvfscqd kqntvceecp gtysdeanh vdpclpctvc edter**qlrec tr**wadaecee ipgr**witrst ppegsdstap stqepeappe qdliastvag vvttvmgssq pvvtrgttdn

Figure 13 SEQ ID NO. 4 Human p75NTR(NBP) neurotrophin binding domain 1
CAYGYYQDETTGR

Figure 14 SEQ ID NO. 5 Human p75NTR(NBP) neurotrophin binding domain 2
VCEAGSGLVFSCQD KQNTVCEECP GGTYSDEANH VDPCLPCTVCEDTER

Figure 15 SEQ ID NO.6 Human p75NTR(NBP) neurotrophin binding domain 3
VCEAGSGLVFSCQDK

Figure 16 SEQ ID NO. 7 Human p75NTR(NBP) neurotrophin binding domain 4
WADAECEEIPGR

Figure 17 SEQ ID NO. 8 Human p75NTR(NBP) neurotrophin binding domain 5
LDSVTSDVVSATEPCKP

Figure 18 SEQ ID NO. 9 Human Transferrin

```
  1 mrlavgallv cavlglclav pdktvrwcav seheatkcqs frdhmksvip sdgpsvacvk
 61 kasyldcira iaaneadavt ldaglvyday lapnnlkpvv aefygskedp qtfyyavavv
121 kkdsgfqmnq lrgkkschtg lgrsagwnip igllycdlpe prkplekava nffsgscapc
181 adgtdfpqlc qlcpgcgcst lnqyfgysga fkclkdgagd vafvkhstif enlankadrd
241 qyellcldnt rkpvdeykdc hlaqvpshtv varsmggked liwellnqaq ehfgkdkske
301 fqlfssphgk dllfkdsahg flkvpprmda kmylgyeyvt airnlregtc peaptdeckp
361 vkwcalshhe rlkcdewsvn svgkiecvsa ettedciaki mngeadamsl dggfvyiagk
421 cglvpvlaen ynksdncedt peagyfavav vkksasdltw dnlkgkksch tavgrtagwn
481 ipmgllynki nhcrfdeffs egcapgskkd sslcklcmgs glnlcepnnk egyygytgaf
541 rclvekgdva fvkhqtvpqn tggknpdpwa knlnekdyel lcldgtrkpv eeyanchlar
601 apnhavvtrk dkeacvhkil rqqqhlfgsn vtdcsgnfcl frsetkdllf rddtvclakl
661 hdrntyekyl geeyvkavgn lrkcstssll eactfrrp
```

Figure 19 SEQ ID NO. 10 Human Albumin

```
  1 mkwvtfisll flfssaysrg vfrrdahkse vahrfkdlge enfkalvlia faqylqqcpf
 61 edhvklvnev tefaktcvad esaencdksl htlfgdklct vatlretyge madccakqep
121 ernecflqhk ddnpnlprlv rpevdvmcta fhdneetflk kylyeiarrh pyfyapellf
181 fakrykaaft eccqaadkaa cllpkldelr degkassakq rlkcaslqkf gerafkawav
241 arlsqrfpka efaevsklvt dltkvhtecc hgdllecadd radlakyice nqdsissklk
301 eccekpllek shciaevend empadlpsla adfveskdvc knyaeakdvf lgmflyeyar
361 rhpdysvvll lrlaktyett lekccaaadp hecyakvfde fkplveepqn likqncelfe
421 qlgeykfqna llvrytkkvp qvstptlvev srnlgkvgsk cckhpeakrm pcaedylsvv
481 lnqlcvlhek tpvsdrvtkc cteslvnrrp cfsalevdet yvpkefnaet ftfhadictl
541 sekerqikkq talvelvkhk pkatkeqlka vmddfaafve kcckaddket cfaeegkklv
601 aasqaalgl
```

Figure 20. SEQ ID NO. 11 Human Fc IgG1

```
  1 ggpsvflfpp kpkdtlmisr tpevtcvvvd vshedpevkf nwyvdgvevh naktkpreeq
 61 ydstyrvvsv ltvlhqdwln gkeykckvsn kalpapiekt iskakgqpre pqvytlppsr
121 eemtknqvsl tclvkgfyps diavewesng qpennykttp pvldsdgsff lyskltvdks
181 rwqqgnvfsc svmhealhnh ytqkslslsp gk
```

Figure 21. SEQ ID NO. 12 Human Fc IgG2

```
  1 astkgpsvfp lapcsrstse staalgclvk dyfpepvtvs wnsgaltsgv htfpavlqss
 61 glyslssvvt vtssnfgtqt ytcnvdhkps ntkvdktver kccvecppcp appvagpsvf
121 lfppkpkdtl misrtpevtc vvvdvshedp evqfnwyvdg mevhnaktkp reeqfnstfr
181 vvsvltvvhq dwlngkeykc kvsnkglpap iektisktkg qprepqvytl ppsreemtkn
241 qvsltclvkg fypsdiavew esngqpenny kttppmldsd gsfflysklt vdksrwqqgn
301 vfscsvmhea lhnhytqksl slspgk
```

Figure 22. SEQ ID NO. 13 Human Fc IgG3

```
  1 cytllllttp swvlsqvtlk esgpvlvkpt etltltctvs gfslsnakmg vswirqppgk
 61 alewlahifs ndeksystsl ksrltiskdt sksqvvltmt nmdpvdtaty ycariftity
121 snyvlqyyyy mdvwgkgttv tvssastkgp svfplapcsr stsgg
```

Figure 23. SEQ ID NO. 14 Human Fc IgG4

```
  1 apeflggpsv flfppkpkdt lmisrtpevt cvvvdvsqed pevqfnwyvd gvevhnaktk
 61 preeqfnsty rvvsvltvlh qdwlngkeyk ckvsnkglps siektiskak gqprepqvyt
121 lppsqeemtk nqvsltclvk gfypsdiave wesngqpenn ykttppvlds dgsfflyskl
181 tvdksrwqeg nvfscsvmhe alhnhytqks lslslgk
```

Figure 24. SEQ ID NO. 15 Human Fc Fragment Engineered For Extended Serum Half-Life

```
  1 ggpsvflfpp kpkdtlyitr epevtcvvvd vshedpevkf nwyvdgvevh naktkpreeq
 61 ynstyrvvsv ltvlhqdwln gkeykckvsn kalpapiekt iskakgqpre pqvytlppsr
121 deltknqvsl tclvkgfyps diavewesng qpennykttp pvldsdgsff lyskltvdks
181 rwqqgnvfsc svmhealhnh ytqkslsls
```

Figure 25. SEQ ID NO. 16 Human Fc Fragment Engineered For Lack Of Effector Functions

```
  1 thtcppcpap efeggpsvfl fppkpkdtlm isrtpevtcv vvdvshedpe vkfnwyvdgv
 61 evhnaktkpr eeqynstyrv vsvltvlhqd wlngkeykck vsnkalpasi ektiskakgq
121 prepqvytlp psreemtknq vsltclvkgf ypsdiavewe sngqpennyk ttppvldsdg
181 sfflyskltv dksrwqqgnv fscsvmheal hnhytqksls lspgk
```

Figure 26: SEQ ID NO. 17 p75NTR(NBP)-Fc linker

(GGGGS)*n* (*n* = 1 to 4)

Figure 27: SEQ ID NO. 18 p75NTR(NBP)-Fc linker

(EAAAK)*n* (*n* = 2 to 5)

Figure 28: SEQ ID NO. 19 p75NTR(NBP)-Fc linker

GGGGS