

NGFR p75 (NGFR5): sc-58567

BACKGROUND

The Trk oncogene encodes a membrane-spanning protein tyrosine kinase, gp140Trk, whose expression is restricted *in vivo* to neurons of the sensory spinal and cranial ganglia of neural crest origin. Nerve growth factor (NGF) stimulates tyrosine phosphorylation of Trk A in neural cell lines and in embryonic dorsal root ganglia. Tyrosine phosphorylation of Trk by NGF is rapid, specific and occurs with picomolar quantities of factor, indicating that the response is mediated by physiological amounts of NGF, suggesting that Trk A participates in the primary signal transduction mechanism of NGF. An additional component of the Trk A receptor complex, NGFR p75, binds to the neurotrophic factors with low affinity but is required for efficient signaling. NGFR p75 accelerates Trk A activation and may recruit downstream effector molecules to the liganded complex.

CHROMOSOMAL LOCATION

Genetic locus: NGFR (human) mapping to 17q21.33.

SOURCE

NGFR p75 (NGFR5) is a mouse monoclonal antibody raised against NGFR p75 from A875 melanoma cells of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

APPLICATIONS

NGFR p75 (NGFR5) is recommended for detection of NGFR p75 of human and feline origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells); non cross-reactive with mouse or rat NGFR p75.

Suitable for use as control antibody for NGFR p75 siRNA (h): sc-36058, NGFR p75 shRNA Plasmid (h): sc-36058-SH and NGFR p75 shRNA (h) Lentiviral Particles: sc-36058-V.

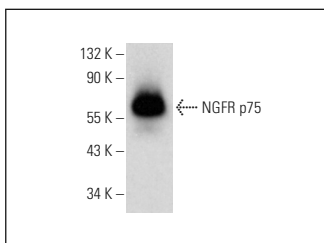
Molecular Weight of NGFR p75: 75 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237 or RD whole cell lysate: sc-364791.

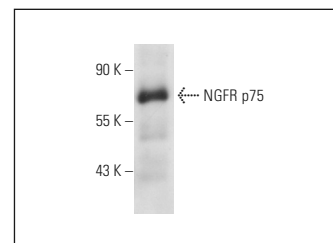
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



NGFR p75 (NGFR5): sc-58567. Western blot analysis of NGFR p75 expression in RD whole cell lysate.



Western blot analysis of NGFR p75 expression in SK-N-MC whole cell lysate immunoprecipitated with NGFR p75 (NGFR5): sc-58567 and detected with NGFR p75 (C-20): sc-6188.

SELECT PRODUCT CITATIONS

1. Onorati, M., et al. 2013. Human pluripotent stem cell differentiation into authentic striatal projection neurons. *Stem Cell Rev.* 9: 461-474.
2. Liu, M., et al. 2014. (-)-Epigallocatechin-3-gallate ameliorates learning and memory deficits by adjusting the balance of TrkA/p75^{NTR} signaling in APP/PS1 transgenic mice. *Mol. Neurobiol.* 49: 1350-1363.
3. Okumura, T., et al. 2014. MicroRNA-203 inhibits the progression of esophageal squamous cell carcinoma with restored epithelial tissue architecture *in vivo*. *Int. J. Oncol.* 44: 1923-1932.
4. Rocco, M.L., et al. 2018. NGF protects corneal, retinal, and cutaneous tissues/cells from phototoxic effect of UV exposure. *Graefes Arch. Clin. Exp. Ophthalmol.* 256: 729-738.
5. Salvinelli, F., et al. 2018. Endogenous nerve growth factor stimulation: effects on auditory pathway neural cells in a mouse model. *Eur. Rev. Med. Pharmacol. Sci.* 22: 7013-7019.
6. Lisi, L., et al. 2022. The effects of painless nerve growth factor on human microglia polarization. *Front. Cell. Neurosci.* 16: 969058.



See **NGFR p75 (B-1): sc-271708** for NGFR p75 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.