

# NGFR p75 (MC-192): sc-53631

## 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.

## REFERENCES

1. Martin-Zanca, D., et al. 1986. A human oncogene formed by the fusion of truncated Tropomyosin and protein tyrosine kinase sequences. *Nature* 319: 743-748.
2. Reinach, F.C., et al. 1986. Tissue-specific expression of the human Tropomyosin gene involved in the generation of the Trk oncogene. *Nature* 322: 648-650.

## CHROMOSOMAL LOCATION

Genetic locus: Ngfr (mouse) mapping to 11 D.

## SOURCE

NGFR p75 (MC-192) is a mouse monoclonal antibody raised against PC-12 cells of rat origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NGFR p75 (MC-192) is available conjugated to either phycoerythrin (sc-53631 PE), fluorescein (sc-53631 FITC) or Alexa Fluor<sup>®</sup> 647 (sc-53631 AF647) 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

## APPLICATIONS

NGFR p75 (MC-192) is recommended for detection of NGFR p75 of mouse and rat 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) and flow cytometry (1 µg per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for NGFR p75 siRNA (m): sc-37268, NGFR p75 shRNA Plasmid (m): sc-37268-SH and NGFR p75 shRNA (m) Lentiviral Particles: sc-37268-V.

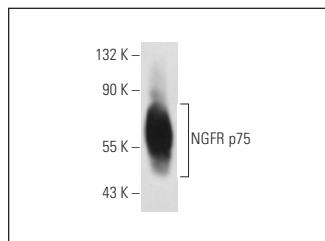
Molecular Weight of NGFR p75: 75 kDa.

Positive Controls: PC-12 cell lysate: sc-2250.

## STORAGE

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

## DATA



NGFR p75 (MC-192): sc-53631. Western blot analysis of NGFR p75 expression in PC-12 whole cell lysate under non-reducing conditions.

## SELECT PRODUCT CITATIONS

1. Ventresca, E.M., et al. 2015. Association of p75<sup>NTR</sup> and α9β1 integrin modulates NGF-dependent cellular responses. *Cell. Signal.* 27: 1225-1236.
2. Fornes, R., et al. 2016. Maternal testosterone and placental function: effect of electroacupuncture on placental expression of angiogenic markers and fetal growth. *Mol. Cell. Endocrinol.* 433: 1-11.
3. Pathak, A., et al. 2018. Retrograde degenerative signaling mediated by the p75 neurotrophin receptor requires p150<sup>Glued</sup> deacetylation by axonal HDAC1. *Dev. Cell* 46: 376-387.
4. Khirug, S., et al. 2021. Protective role of low ethanol administration following ischemic stroke via recovery of KCC2 and p75<sup>NTR</sup> expression. *Mol. Neurobiol.* 58: 1145-1161.
5. Xiong, L.L., et al. 2021. ERRATUM: effect of scutellarin on neurogenesis in neonatal hypoxia-ischemia rat model: potential mechanisms of action. *Am. J. Chin. Med.* 49: 2053-2055.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



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