

NGFR p75 (ME20.4): sc-13577

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 gp140Trk 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 gp140Trk participates in the primary signal transduction mechanism of NGF. An additional component of the gp140 trk receptor complex, NGFR p75, binds to the neurotrophic factors with low affinity but is required for efficient signaling. NGFR p75 accelerates gp140Trk activation and may recruit downstream effector molecules to the liganded complex.

CHROMOSOMAL LOCATION

Genetic locus: NGFR (human) mapping to 17q21.33; Ngfr (mouse) mapping to 11 D.

SOURCE

NGFR p75 (ME20.4) is a mouse monoclonal antibody raised against WM245 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.

NGFR p75 (ME20.4) is available conjugated to agarose (sc-13577 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13577 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13577 PE), fluorescein (sc-13577 FITC), Alexa Fluor® 488 (sc-13577 AF488), Alexa Fluor® 546 (sc-13577 AF546), Alexa Fluor® 594 (sc-13577 AF594) or Alexa Fluor® 647 (sc-13577 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13577 AF680) or Alexa Fluor® 790 (sc-13577 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NGFR p75 (ME20.4) is recommended for detection of NGFR p75 of mouse, rat and human 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

NGFR p75 (ME20.4) is also recommended for detection of NGFR p75 in additional species, including bovine, porcine, feline and canine.

Suitable for use as control antibody for NGFR p75 siRNA (h): sc-36058, NGFR p75 siRNA (m): sc-37268, NGFR p75 shRNA Plasmid (h): sc-36058-SH, NGFR p75 shRNA Plasmid (m): sc-37268-SH, NGFR p75 shRNA (h) Lentiviral Particles: sc-36058-V and NGFR p75 shRNA (m) Lentiviral Particles: sc-37268-V.

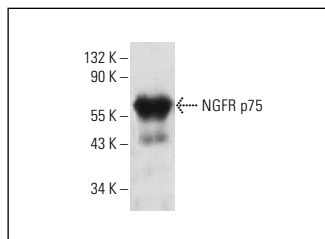
Molecular Weight of NGFR p75: 75 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

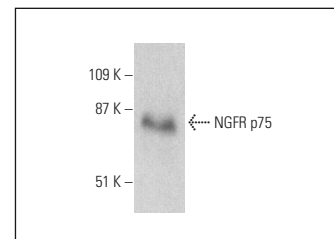
STORAGE

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

DATA



Western blot analysis of NGFR p75 expression in Hs 294T whole cell lysate immunoprecipitated with NGFR p75 (ME20.4): sc-13577 and detected with NGFR p75 (H-92): sc-5634.



NGFR p75 (ME20.4) HRP: sc-13577 HRP. Direct western blot analysis of NGFR p75 expression in SK-N-MC whole cell lysate.

SELECT PRODUCT CITATIONS

- Marinova, T., et al. 2003. Cellular localization of NGF and NGF receptors in aged human thymus. *Folia Biol.* 49: 160-164.
- Soland, T.M., et al. 2008. Nerve growth factor receptor (p75^{NTR}) and pattern of invasion predict poor prognosis in oral squamous cell carcinoma. *Histopathology* 53: 62-72.
- Wang, W., et al. 2009. Patterns of expression and function of the p75^{NGFR} protein in pancreatic cancer cells and tumours. *Eur. J. Surg. Oncol.* 35: 826-832.
- Brusevold, I.J., et al. 2010. Induction of invasion in an organotypic oral cancer model by CoCl₂, a hypoxia mimetic. *Eur. J. Oral Sci.* 118: 168-176.
- Gephart, J.D., et al. 2011. Identification of a novel mono-leucine basolateral sorting motif within the cytoplasmic domain of amphiregulin. *Traffic* 12: 1793-1804.
- Park, B.W., et al. 2012. Peripheral nerve regeneration using autologous porcine skin-derived mesenchymal stem cells. *J. Tissue Eng. Regen. Med.* 6: 113-124.
- Maddalena, F., et al. 2013. Resistance to paclitaxel in breast carcinoma cells requires a quality control of mitochondrial antiapoptotic proteins by TRAP1. *Mol. Oncol.* 7: 895-906.
- Chambers, C.B., et al. 2015. A system for creating stable cell lines that express a gene of interest from a bidirectional and regulatable herpes simplex virus type 1 promoter. *PLoS ONE* 10: e0122253.
- Perotti, V., et al. 2016. NFATc2 is an intrinsic regulator of melanoma dedifferentiation. *Oncogene* 35: 2862-2872.

RESEARCH USE

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

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