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NGFR Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM1842a

Product Information

Application	WB, IF, IHC-P, E
Primary Accession	P08138
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Names	8G3G10
Calculated MW	45183

Additional Information

Gene ID	4804
Other Names	Tumor necrosis factor receptor superfamily member 16, Gp80-LNGFR, Low affinity neurotrophin receptor p75NTR, Low-affinity nerve growth factor receptor, NGF receptor, p75 ICD, CD271, NGFR, TNFRSF16
Target/Specificity	This NGFR antibody is generated from mouse immunized with NGFR recombinant protein.
Dilution	WB~~1:500~1000 IF~~1:100 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	NGFR Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NGFR
Synonyms	TNFRSF16
Function	Low affinity receptor which can bind to NGF, BDNF, NTF3, and NTF4. Forms a heterodimeric receptor with SORCS2 that binds the precursor forms of NGF,

	BDNF and NTF3 with high affinity, and has much lower affinity for mature NGF and BDNF (PubMed:24908487). Plays an important role in differentiation and survival of specific neuronal populations during development (By similarity). Can mediate cell survival as well as cell death of neural cells. Plays a role in the inactivation of RHOA (PubMed:26646181). Plays a role in the regulation of the translocation of GLUT4 to the cell surface in adipocytes and skeletal muscle cells in response to insulin, probably by regulating RAB31 activity, and thereby contributes to the regulation of insulin- dependent glucose uptake (By similarity). Necessary for the circadian oscillation of the clock genes BMAL1, PER1, PER2 and NR1D1 in the suprachiasmatic nucleus (SCmgetaN) of the brain and in liver and of the genes involved in glucose and lipid metabolism in the liver (PubMed:23785138). Together with BFAR negatively regulates NF-kappa-B and JNK-related signaling pathways (PubMed:22566094).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cytoplasm. Perikaryon {ECO:0000250|UniProtKB:Q9Z0W1}. Cell projection, growth cone {ECO:0000250|UniProtKB:Q9Z0W1}. Cell projection, dendritic spine {ECO:0000250|UniProtKB:Q9Z0W1}

Background

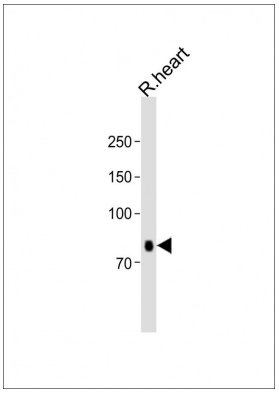
Nerve growth factor receptor contains an extracellular domain containing four 40-amino acid repeats with 6 cysteine residues at conserved positions followed by a serine/threonine-rich region, a single transmembrane domain, and a 155-amino acid cytoplasmic domain. The cysteine-rich region contains the nerve growth factor binding domain.

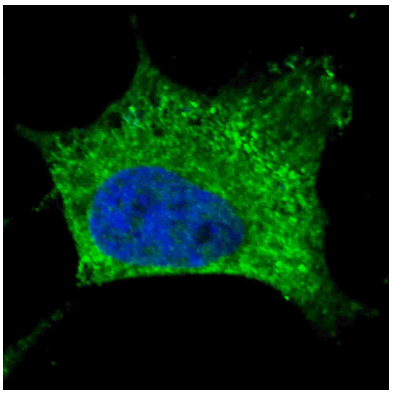
References

References for protein:
1. Human melanoma-initiating cells express neural crest nerve growth factor receptor CD271. Boiko AD, et al. Nature, 2010 Jul 1. PMID 20596026. Interleukin-9 polymorphism in infants with respiratory syncytial virus infection: an opposite effect in boys and girls. Schuurhof A, et al. Pediatr Pulmonol, 2010 Jun. PMID:20503287.
2. Poor replication of candidate genes for major depressive disorder using genome-wide association data. Bosker FJ, et al. Mol Psychiatry, 2010 Mar 30. PMID 20351714.
3. New genetic associations detected in a host response study to hepatitis B vaccine. Davila S, et al. Genes Immun, 2010 Apr. PMID 20237496.
4. Role of the neurotrophin network in eating disorders' subphenotypes: body mass index and age at onset of the disease. Gratacòs M, et al. J Psychiatr Res, 2010 Oct. PMID 20219210.
References for SY5Y (SH-SY5Y; ATCC#CRL-2266): 1. Ross RA, et al. Coordinate morphological and biochemical interconversion of human neuroblastoma cells. J. Natl. Cancer Inst. 71: 741-749, 1983. [PubMed: 6137586];
2. Biedler JL, et al. Multiple neurotransmitter synthesis by human neuroblastoma cell lines and clones. Cancer Res. 38: 3751-3757, 1978. [PubMed: 29704].

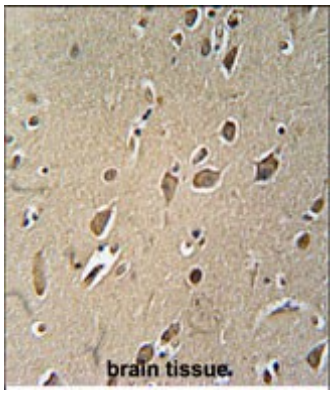
Images

All lanes: Anti-NGFR Antibody at 1:1000 dilution + Rat heart lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Mouse IgG, (H+L), Peroxidase conjugated (ASP1613) at 1/8000 dilution. Observed band size: 75 KDa Blocking/Dilution buffer: 5% NFDM/TBST.





Fluorescent confocal image of SY5Y cells stained with NGFR antibody SY5Y cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.2%, 30 min). Cells were then incubated with AM1842a NGFR primary antibody (1:100, 2 h at room temperature). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-mouse antibody (green) was used (1:1000, 1h). Nuclei were counterstained with Hoechst 33342 (blue) (10 µg/ml, 5 min).



NGFR Antibody(Cat. #AM1842a) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the NGFR Antibody for immunohistochemistry. Clinical relevance has not been evaluated.

Citations

- Immunofluorescence analysis of sensory nerve endings in the interosseous membrane of the forearm
- NGFR Increases the Chemosensitivity of Colorectal Cancer Cells by Enhancing the Apoptotic and Autophagic Effects of 5-fluorouracil the Activation of S100A9

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