Mouse monoclonal antibody to human p75NTR [ME20.4]: IgG

Catalogue No.:	M-011-100
Description:	Nerve growth factor receptor (NGFR) is also referred to as p75(NTR) due to its molecular mass and its ability to bind at low affinity not only NGF (see 162030), but also other neurotrophins, including brain-derived neurotrophic factor (BDNF; 113505), neurotrophin-3 (NTF3; 162660), and neurotrophin-4/5 (NTF5; 162662). At the time of its discovery, NGFR was considered a unique type of protein. Subsequently, however, a large superfamily of tumor necrosis factor receptors were found to share the overall structure of NGFR (4 extracellular ligand-binding, cysteine-rich repeats, or CRs, and signaling through association with, or disassociation from, cytoplasmic interactors). The identification of this superfamily helped elucidate some of the biologic functions of NGFR, including its ultimate involvement in the nuclear factor kappa-B (NFKB; see 164011) and apoptosis pathways. As a monomer, NGFR binds NGF with low affinity. Higher affinity binding is achieved by association with higher molecular mass, low-affinity neurotrophin receptors, namely the tropomyosin receptor kinases, TRKA (NTRK1; 191315), TRKB (NTRK2; 600456), and TRKC (NTRK3; 191316). TRKA, TRKB, and TRKC are specific for or 'preferred by' NGF, NTF5 and BDNF, and NTF3, respectively (Ip et al., 1993). NTF3 also binds to TRKA and TRKB, but with significantly lower affinity
Batch No.:	See product label
Unit size:	100 µg
Antigen:	The p75NTR antibody was derived from immunization of mice with human WM245 melanoma cells.
Clone:	ME20.4
Other Names:	Low-affinity nerve growth factor receptor; NGF receptor; Gp80-LNGFR; p75 ICD; Low affinity neurotrophin receptor p75NTR; Tumor necrosis factor receptor superfamily member 16; CD271; NGFR; TNFRSF16;
Accession:	P08138 TNR16_HUMAN;
Produced in:	Mouse
Purity:	Immunoglobulin (IgG2A) was purified using Protein G column (Amersham Pharmacia), polished with Sephacryl 200HR (Amersham Pharmacia) in PBS and then lyophilized. Purity was analysed using electrophoresis, 4-12% Bis Tris Gel (Invitrogen).
Applications:	Immunohistochemistry, immunofluorescence, flow cytometry. Suggested working dilutions: For Immunohistochemistry a concentration of 2 µg/ml is recommended. Antibody not appropriate for Western Blot. For FACS a concentration of 20 µg/ml is recommended. At least 1 in 5000 dilution is recommended for 1 site ELISAs. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	This antibody recognises p75NTR (low affinity neurotrophin receptor)
Cross-reactivity:	Reacts with human, cat, dog, pig, rabbit and sheep. Does not react with rat or mouse.
Form:	Lyophilised
Reconstitution:	Reconstitute with the addition of 100 µl of sterile water. Centrifuge to remove any insoluble material.

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Storage: It is recommended that a thawed sample is stored at 4ºC for no longer than 2 weeks. Allocation of appropriate anti-bacterial agent can increase shelf life by several weeks. Diluted serum should be prepared as required. Long term stability requires storage, preferably in small aliquots at -20ºC or lower. Glycerol (1:1) can be added to neat serum for additional stability if intended use does not prevent this.

Specific References:

1. Liu W. et al (2012) Distribution of P75 neurotrophin receptor in adult human cochlea-an immunohistochemical study.
Cell Tissue Res. 2012 Mar 31.

2. Inoue K. et al. (2009) Differential expression of stem-cell-associated markers in human hair follicle epithelial cells. Lab Invest. 2009 Aug;89(8):844-56.

3. Ariga M. et al. (2008) Functional role of sortilin in myogenesis and development of insulin-responsive glucose transport system in C2C12 myocytes J Biol Chem. 2008 Apr 11;283(15):10208-20

4. Rogers ML et al (2010) ProNGF mediates death of Natural Killer cells through activation of the p75NTR-sortilin complex.
J Neuroimmunol. 2010 Sep 14;226(1-2):93-103.

References:

1.Walker BR et al. (2007) Behav Brain Res 176:109-20

2. Ross A.H. et al. (1984) Characterization of nerve growth factor receptor in neural crest tumors using monoclonal antibodies. Proc Natl Acad Sci U S A. 1984 Nov;81(21):6681-5. ORIGINAL PAPER

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