Mouse monoclonal antibody to rat p75NTR [MC192] - FITC

Catalogue No.: M-016-100-FT

Description: Monoclonal antibody MC192 against the rat low affinity nerve growth factor receptor (p75NTR) is derived from the fusion of Sp2/0-Ag 14 myeloma cells with mouse immune splenocytes. MC192 monoclonal antibody was originally generated by Chandlers et al. p75NTR was originally discovered as a low affinity nerve growth factor receptor. Later it was found that it was the receptor for all neurotrophins. It mediates signals of neurotrophins for neuronal survival, apoptosis, neurite outgrowth and synaptic plasticity. Recently, it has been revealed that p75NTR not only acts as the receptor for neurotrophins but also the receptor for many other pathological ligands such as prions, rabies virus and amyloid beta. p75NTR also acts as a co-receptor for NOGO which mediates inhibitory signals of myelin associated protein. p75NTR is highly expressed in a number of non-neuronal and neuronal cells including motor neurons during development and also in damaged neurons. MC192 has a potential use as the ligand for gene delivery into p75NTR-expressing rat cells via a receptor-mediated mechanism. FUNCTION: Low affinity receptor which can bind to NGF, BDNF, NT-3, and NT-4. Can mediate cell survival as well as cell death of neural cells. SUBUNIT: Homodimer; disulfide-linked. Interacts with p75NTR-associated cell death executor. Interacts with NGFRAP1/BEX3. Interacts with TRAF2, TRAF4, TRAF6, PTPN13 and RANBP9.

Batch No.: See product label

Unit size: 100 µg

Antigen: Rat p75NTR

Clone: MC192

Other Names: Low-affinity nerve growth factor receptor; NGF receptor; Gp80-LNGFR; p75 ICD; Low affinity neurotrophin receptor p75NTR

Accession: TNR16_RAT

Produced in: Mouse

Purity: Immunoglobulin (IgG1) was purified using Protein G column (Amersham Pharmacia), polished with Sephacryl 200HR (Amersham Pharmacia) in PBS. The antibody was then conjugated to Fluorescein isomer 1 (FITC, Sigma). A minimum fluorescein: protein ratio of 3:1 is guaranteed. The conjugate was purified via gel filtration using a G25 fine grain gel in 10 mMTris/50mM NaCl solution.

Applications: Immunohistochemistry, immunofluorescence, flow cytometry, NGF receptor p75 dynamics, retrograde transport studies, study of intracellular trafficking. Suggested working dilutions: For immunohistochemistry a concentration of 1-2 Âµg/ml is recommended. The antibody is not appropriate for Western Blots . The recommended concentration for FACS is 20 Âµg/ml and at least 1 in 5000 dilution is recommended for 1 site ELISA. Optimal working dilution should be determined by the end user. MC192 is not suitable as a blocking agent, although it has been incorrectly used for this purpose in many published works. The antibody was generated specifically by screening for monoclonals that had the ability to ENHANCE the binding of NGF, the natural ligand for p75. Therefore, this antibody is particularly unusual. The full details can

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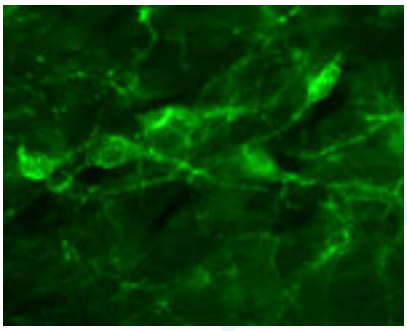
	be found in the original paper, which is listed on our datasheet (see Chandler et al, 1984).. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	MC192 recognizes the extracellular domain of the neurotrophin receptor p75NTR in rat. MC192 antibody may be used for immunocytochemical localisation of rat cells expressing p75NTR, ELISA and western blot. This antibody has also been used for the construction of the MC192-saporin immunotoxin for specific elimination of neuronal populations in basal forebrain cholinergic neurons to generate an animal model for Alzheimer's disease. Using Flow Cytometry, this antibody has frequently been employed for panning to isolate p75NTR-expressing rat cells.
Cross-reactivity:	Reacts with rat. Does not react with mouse.
Form:	Liquid
Storage:	The antibody conjugate can be stored at 4°C for up to 4 months with the addition of appropriate antibacterial agent.
Expiry Date:	Four months after purchase.
Specific References:	1. Davies A. et al (2010) The alpha2delta subunits of voltage-gated calcium channels form GPI-anchored proteins, a post translational modification essential for function Proc Natl Acad Sci U S A. Jan 26;107(4):1654-9
References:	1. Chandler, C. E. et al (1984) J Biol Chem 259, 6882-6889 2. Lagares A et al (2007) J of neurosci 27(30), 7939-7953



Immunofluorescent staining of rat basal forebrain cholinergic neurons using MC192-FITC conjugated antibodies, following intraventricullar delivery (5µg). Animals were sacrificed and fixed 72hr following intraventricular injections, and processed for microscopy.

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