abcam

ab195179

Alexa Fluor® 488 Anti-p75 NGF Receptor antibody [EP1039Y]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EP1039Y
Purification technique	Affinity purification Protein A
Dissociation constant	3.25 x 10^{-10} M
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Rat
Dilution info	1/100
Notes	-

Expected

Species	Human, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human, Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Rat, Mouse
Dilution info	-
Notes	-

Target data

See full target information NGFR

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).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research,

contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or outlicensing@thermofisher.com.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The p75 NGF receptor also known as p75 NGFR or anti-NTR is a transmembrane protein with a molecular mass of approximately 75 kDa. It is a member of the tumor necrosis factor receptor superfamily. This receptor is widely expressed in the nervous system particularly in neurons glial cells and Schwann cells. The p75 receptor primarily binds to neurotrophins such as nerve growth factor (NGF) influencing neuronal survival apoptosis and growth.
Biological function summary	The p75 receptor functions as an important part of a signaling complex that mediates diverse cellular responses. It often forms complexes with other receptors like TrkA but can also signal independently. In particular the p75 protein can form a biological chimera with different co-receptors influencing its downstream effects. This makes it significant in processes like apoptosis and neuronal differentiation as well as influencing neurotrophin-mediated signaling.
Pathways	The p75 receptor plays an important role in pathways involving neuronal survival and apoptosis. One key pathway involves the nerve growth factor (NGF) signaling pathway where p75 collaborates with Trk receptors enhancing or inhibiting NGF signaling based on cellular context. Another pathway is the JNK signaling pathway where the p75 receptor interacts with proteins like sortilin contributing to apoptosis and stress responses in neurons. These interactions determine the outcome of neurotrophic signaling highlighting its role in cell fate decisions.
Associated diseases and disorders	P75 receptor is associated with several neurodegenerative conditions and cancers. Its involvement in Alzheimer's disease is significant because altered p75 expression and function can contribute to neurodegeneration through apoptosis pathways. This receptor is also linked to glioblastoma where it might promote tumor progression in coordination with proteins such as sortilin. These links make p75 receptor a target of interest for therapeutic intervention in these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

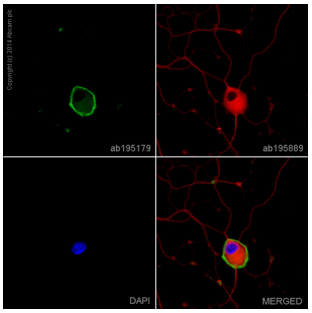
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

---

1 product image



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-p75 NGF Receptor antibody [EP1039Y] (ab195179)

P75 NGF Receptor Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-p75 NGF Receptor antibody

ab195179 staining p75 NGF Receptor in NGF-differentiated PC-12 cells. The cells were fixed with 100% methanol (5 min), permeabilised in 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab195179 at 1/100 dilution (shown in green) and ab195889, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 594, shown in red) at 1/167 dilution overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.
This product gave a positive signal in 4% formaldehyde (10 min) fixed NGF-differentiated PC-12 cells under the same testing conditions.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.