abcam

ab216495

Anti-p75 NGF Receptor antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Proclin 300 Constituents: 50% Glycerol (glycerin, glycerine), 48.98% TBS, 1X, 1% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Rat Ngfr aa 250-350 conjugated to Keyhole Limpet Haemocyanin. The exact immunogen used to generate this antibody is proprietary information. Database link P07174
Purification technique	Affinity purification Protein A
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Expected

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

WB

Tested

Species	Mouse
Dilution info	1/100 - 1/1000
Notes	-

Expected

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

IHC-P

Tested

Species	Rat
Dilution info	1/100 - 1/500
Notes	(or 1/50 - 1/200 if using a fluorescent secondary antibody).

Expected

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

ICC/IF

Tested

Species	Human

Dilution info	1/50 - 1/200
Notes	-

Expected

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

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

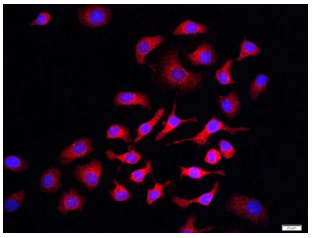
We do not recommend this combination. It is not covered by our product promise.

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.

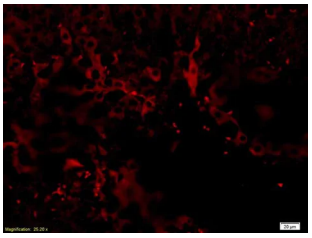
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-p75 NGF Receptor antibody (ab216495)

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

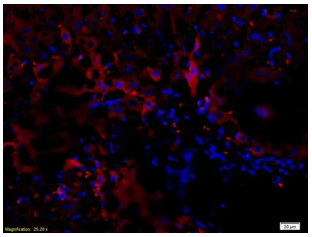
Immunofluorescent analysis of HepG2 cells labeling p75 NGF Receptor with ab216495 at 1/500 dilution in PBS (incubated for two hours at 37°C), followed by Goat Anti-Rabbit IgG (H+L) Cy3 conjugated secondary antibody. DAPI staining of the nucleus was done and then detected.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p75 NGF Receptor antibody (ab216495)

P75 NGF Receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-p75 NGF Receptor antibody

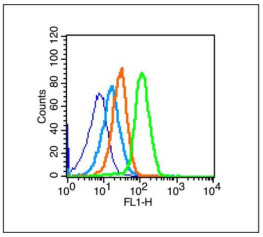
Immunohistochemical analysis of formalin-fixed, paraffin-embedded rat liver tissue labeling p75 NGF Receptor with ab216495 at 1/200 dilution overnight at 4°C, followed by Goat Anti-Rabbit IgG, PE conjugated at 1/200 dilution for 40 minutes at 37°C.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-p75 NGF Receptor antibody (ab216495)

P75 NGF Receptor Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-p75 NGF Receptor antibody

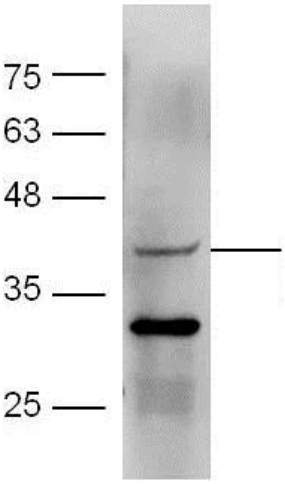
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Flow Cytometry - Anti-p75 NGF Receptor antibody (ab216495)

P75 NGF Receptor Flow Cytometry staining using rabbit Anti-p75 NGF Receptor antibody

Flow Cytometry of Mouse Spleen with ab217628 at 1/100



Western blot - Anti-p75 NGF Receptor antibody (ab216495)

All lanes:
Western blot - Anti-p75 NGF Receptor antibody (ab216495) at 1/300 dilution

All lanes:
Mouse brain lysate

Secondary

All lanes:
Goat Anti-Rabbit IgG Antibody (H+L), HRP Conjugated at 1/5000 dilution

Predicted band size: 45 kDa

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