abcam

ab194321

Alexa Fluor® 488 Anti-Pan Trk antibody [EP1058Y]

Rabbit Recombinant Monoclonal Pan Trk antibody - conjugated to Alexa Fluor® 488. Suitable for ICC/IF and reacts with Human samples. Cited in 3 publications.

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	EP1058Y
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	This product gave a positive signal in U87MG cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min)

Expected

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

Target data

See full target information NTRK1

Function	Receptor tyrosine kinase involved in the development and the maturation of the central and peripheral nervous systems through regulation of proliferation, differentiation and survival of sympathetic and nervous neurons. High affinity receptor for NGF which is its primary ligand (PubMed:1281417, PubMed:15488758, PubMed:17196528, PubMed:1849459, PubMed:1850821, PubMed:22649032, PubMed:27445338, PubMed:8325889). Can also bind and be activated by NTF3/neurotrophin-3. However, NTF3 only supports axonal extension through NTRK1 but has no effect on neuron survival (By similarity). Upon dimeric NGF ligand-binding, undergoes homodimerization, autophosphorylation and activation

(PubMed:1281417). Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades driving cell survival and differentiation. Through SHC1 and FRS2 activates a GRB2-Ras-MAPK cascade that regulates cell differentiation and survival. Through PLCG1 controls NF-Kappa-B activation and the transcription of genes involved in cell survival. Through SHC1 and SH2B1 controls a Ras-PI3 kinase-AKT1 signaling cascade that is also regulating survival. In absence of ligand and activation, may promote cell death, making the survival of neurons dependent on trophic factors. Isoform TrkA-III. Resistant to NGF, it constitutively activates AKT1 and NF-kappa-B and is unable to activate the Ras-MAPK signaling cascade. Antagonizes the anti-proliferative NGF-NTRK1 signaling that promotes neuronal precursors differentiation. Isoform TrkA-III promotes angiogenesis and has oncogenic activity when overexpressed.

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.

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Supplementary info

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

Activity summary	Pan Trk also known as Pan-tropomyosin receptor kinases are receptors that belong to the neurotrophin receptor family including TrkA TrkB and TrkC. They typically express in neural tissues and play a role in neuronal development and function. The mass of Pan Trk can vary as it encompasses several related proteins rather than a single unit. The variant forms are present in both the central and peripheral nervous systems. Researchers often use tags like Pan Trk IHc 555 Pan and Alexa Pan to identify different forms and monitor their expression patterns.
Biological function summary	Pan Trk receptors play a vital role in the survival development and function of neurons by mediating the action of neurotrophins. They participate as part of a receptor complex activated by ligand binding which triggers autophosphorylation. These receptors modulate various processes like neuronal survival and differentiation. Pan Trk signals generally initiate upon binding neurotrophins leading to multiple intracellular events.
Pathways	Pan Trk receptors are central players in signaling pathways such as the MAPK/ERK and PI3K/AKT pathways. These pathways significantly impact cell survival and proliferation. Pan Trk often interacts with proteins like SHC and GRB2 to transmit signals downstream efficiently. These interactions are important for linking the surface receptor activation to the intracellular responses that govern cell growth and survival.
Associated diseases and disorders	Dysregulation or mutations in Pan Trk pathways contribute to neurodegenerative diseases and cancers. For example in neuroblastoma altered Pan Trk expression can modify cell survival signals resulting in tumor growth. These receptors also relate to Alzheimer's disease where Pan Trk dysfunction can affect neuronal resilience and memory pathways. In these disorders Pan Trk associates with various proteins including Tau which can disrupt normal neuronal processes.

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

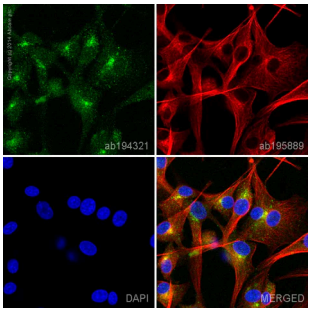
We do not recommend this combination. It is not covered by our product promise.

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-Pan Trk antibody [EP1058Y] (ab194321)

Pan Trk Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Pan Trk antibody

ab194321 staining Pan Trk in U87MG cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1%PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab194321 at a 1/100 dilution (shown in green) and ab195889, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 594), at a 1/250 dilution (shown in red). Nuclear DNA was labelled with DAPI (shown in blue).
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in U87MG cells fixed with 4% formaldehyde (10 min).

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