abcam

ab284409

Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR24009-335
Purification technique	Affinity purification Protein A
Concentration	1.014 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Rat, Mouse
Dilution info	-

Notes	-

Not recommended

Species	Human, Transfected cell line, Transfected cell line - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Rat, Mouse
Dilution info	-
Notes	-

Expected

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

Not recommended

Species	Transfected cell line, Transfected cell line - Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Rat, Mouse, Human, Transfected cell line, Transfected cell line - Human
Dilution info	-
Notes	-

IHC-Fr

Not recommended

Species	Human, Rat, Mouse, Transfected cell line, Transfected cell line - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Transfected cell line
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Transfected cell line - Human
Dilution info	-
Notes	-

WB

Tested

Species	Transfected cell line - Human, Human, Rat, Mouse
Dilution info	-
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284409 is a carrier free version of ab267830.

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.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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

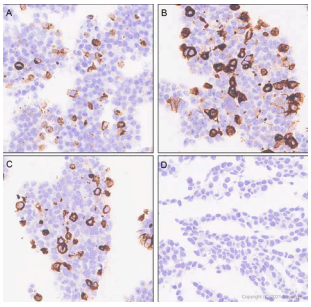
We do not recommend this combination. It is not covered by our product promise.

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.

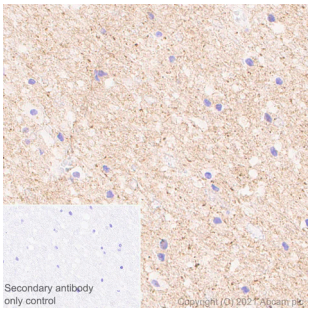
Full details and terms and conditions can be found here:
Terms & Conditions.

17 product images



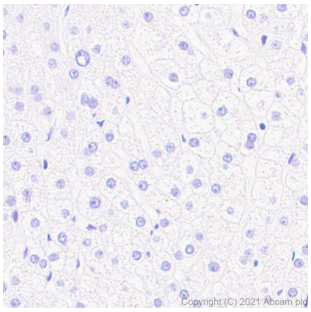
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Panel A HEK-293T (tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining on (A) HEK-293T transfected with TrkC expression vector, (B) HEK-293T transfected with a TrkA expression vector, and (C) HEK-293T transfected with TrkB expression vector. Almost no staining on (D) HEK-293T transfected with empty vector. The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



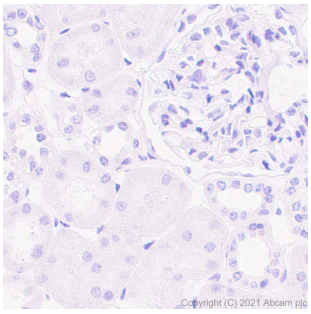
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Human cerebrum tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining on human cerebrum (PMID: 26171003).The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

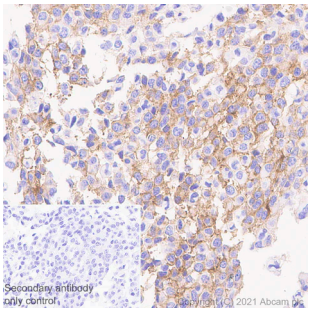
This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: almost no staining on human liver.The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

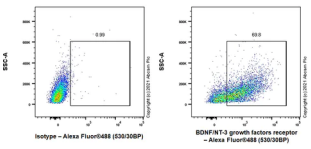
This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: almost no staining on human kidney.The

section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



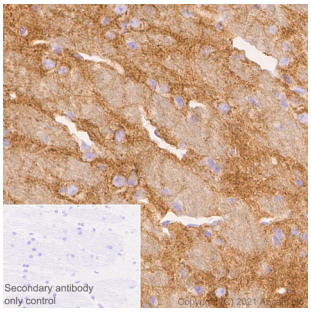
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Human glioblastoma tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining on human glioblastoma (PMID: 26171003).The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Flow Cytometry (Intracellular) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

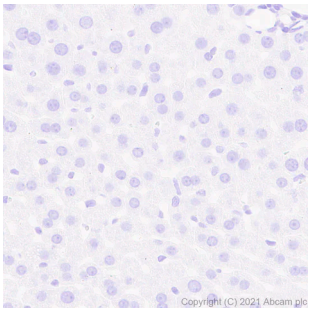
This data was developed using ab267830, the same antibody clone in a different buffer formulation.Flow cytometric analysis of ICR Mouse primary neuron cells labelling Pan Trk with ab267830 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti-Rabbit IgG Fc (Alexa Fluor® 488, ab150097) at 1/2000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

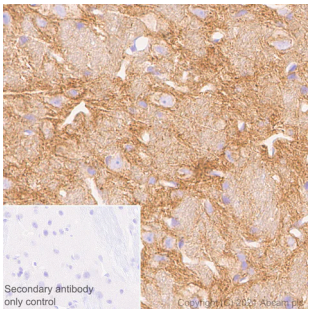
Pan Trk Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse cerebrum using rabbit Anti-Pan Trk antibody

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Positive staining on mouse cerebrum.The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



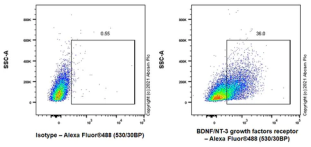
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: almost no staining on rat liver.The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



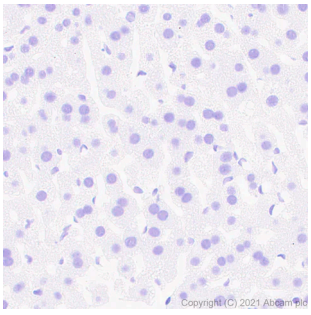
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

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Flow Cytometry (Intracellular) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Flow cytometric analysis of SD Rat primary neuron cells labelling Pan Trk with ab267830 at 1/500 dilution (0.1ug)/ Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat anti-Rabbit IgG Fc (Alexa Fluor® 488, ab150097) at 1/2000 dilution was used as the secondary antibody.

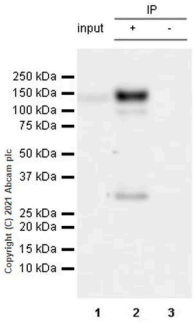


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

Pan Trk Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-Pan Trk antibody

This data was developed using ab267830, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of paraffin-embedded Mouse liver tissue labeling Pan Trk with ab267830 at 1/200 (2.74 ug/ml) followed by a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection) was used. Negative control: almost no staining on mouse liver.The section was incubated with ab267830 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond☒ Polymer Refine Detection)

was used.Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Immunoprecipitation - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.
Pan Trk was immunoprecipitated from 0.35 mg Mouse brain tissue lysate 10 ug with ab267830 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab267830 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: Mouse brain tissue lysate 10 ug

Lane 2: ab267830 IP in Mouse brain tissue lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab267830 in mouse brain tissue lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 8 seconds

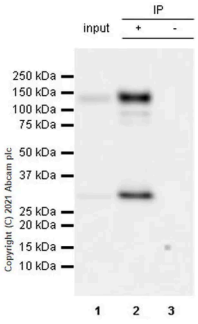
All lanes:
Immunoprecipitation - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

All lanes:
Mouse brain tissue lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 8s



Immunoprecipitation - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation.
Pan Trk was immunoprecipitated from 0.35 mg Rat brain tissue lysate 10 ug with ab267830 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab267830 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: Rat brain tissue lysate 10 ug

Lane 2: ab267830 IP in Rat brain tissue lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab267830 in rat brain tissue lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 8 seconds

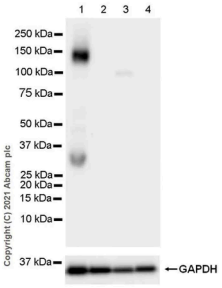
All lanes:
Immunoprecipitation - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

All lanes:
Rat brain tissue lysate at 10 µg

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 8s



Western blot - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

Lane 1:
Human brain tissue lysate

Lane 2:
Human heart tissue lysate

Lane 3:
Human kidney tissue lysate

Lane 4:
Human spleen tissue lysate

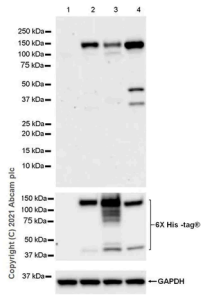
Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Performed under reducing conditions.

Observed band size: 140 kDa

Exposure time: 15s



Western blot - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

Lane 1:
293T (human embryonic kidney) transfected with an empty vector (vector control) containi a myc-His-tag®, whole cell lysate 20

Lane 2:
293T transfected with human TrkB expression vector containi a myc-His-tag®, whole cell lysate 20

Lane 3:
293T transfected with human TrkC expression vector containi a myc-His-tag®, whole cell lysate 20

Lane 4:
293T transfected with human TrkA expression vector containi a myc-His-tag®, whole cell lysate 20

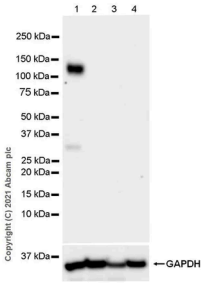
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Performed under reducing conditions.

Observed band size: 140 kDa

Exposure time: 3min



Western blot - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

Lane 1:
Rat brain tissue lysate

Lane 2:
Rat heart tissue lysate

Lane 3:
Rat kidney tissue lysate

Lane 4:
Rat spleen tissue lysate

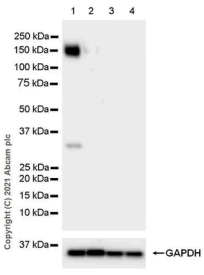
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Performed under reducing conditions.

Observed band size: 140 kDa

Exposure time: 59s



Western blot - Anti-Pan Trk antibody [EPR24009-335] - BSA and Azide free (ab284409)

This data was developed using ab267830, the same antibody clone in a different buffer formulation. Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-Pan Trk antibody [EPR24009-335] (ab267830) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate

Lane 2:

Mouse heart tissue lysate

Lane 3:
Mouse kidney tissue lysate

Lane 4:
Mouse spleen tissue lysate

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Performed under reducing conditions.

Observed band size: 140 kDa

Exposure time: 37s

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