abcam

ab314906

Anti-Pan Trk antibody [RM1032]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM1032
Purification technique	Affinity purification Protein A
Concentration	0.489 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse

Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Mouse
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Transfected cell line

Dilution info	1/1000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/200
Notes	-

Species	Mouse
Dilution info	1/200
Notes	-

Species	Rat
Dilution info	1/200
Notes	-

Not recommended

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

IP

Tested

Species	Human

Dilution info	1/30
Notes	-

Species	Mouse
Dilution info	1/30
Notes	-

Species	Rat
Dilution info	1/30
Notes	-

Not recommended

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Expected

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

Not recommended

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

Target data

See full target information NTRK3

Function	Receptor tyrosine kinase involved in nervous system and probably heart development. Upon binding of its ligand NTF3/neurotrophin-3, NTRK3 autophosphorylates and activates different signaling pathways, including the phosphatidylinositol 3-kinase/AKT and the MAPK pathways, that control cell survival and differentiation.

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

Notes

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

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.

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.

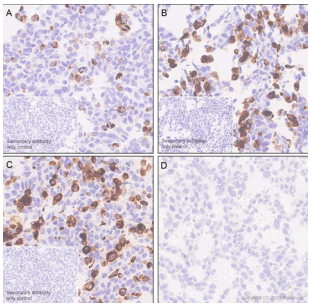
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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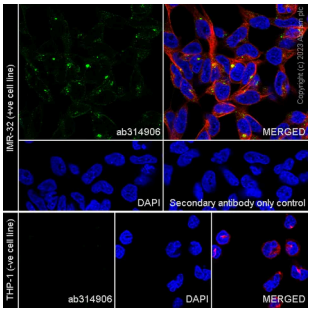
17 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [RM1032] (ab314906)

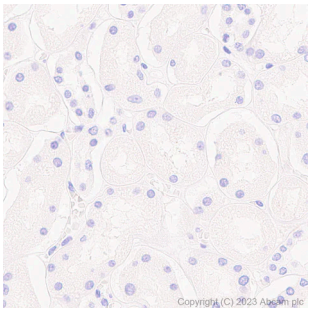
Pan Trk Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pan Trk antibody

Immunohistochemical analysis of paraffin-embedded (A) HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with TrkC expression vector containing a His-tag. (B) HEK-293T transfected with TrkA expression vector containing a His-tag. (C) HEK-293T transfected with TrkB expression vector containing a His-tag. (D) HEK-293T transfected with an empty vector containing a His-tag. Tissue labeling Pan Trk with ab314906 at 1/1000 (0.489 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) HEK-293T transfected with TrkC expression vector containing a His-tag, (B) HEK-293T transfected with TrkA expression vector containing a His-tag, and (C) HEK-293T transfected with TrkB expression vector containing a His-tag. No staining on (D) HEK-293T transfected with an empty vector containing a His-tag. The section was incubated with ab314906 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). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-Pan Trk antibody [RM1032] (ab314906)

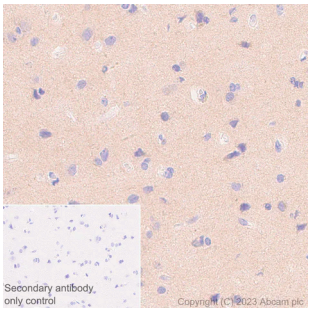
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized IMR-32 (human neuroblastoma neuroblast) cells labelling Pan Trk with ab314906 at 1/200 (2.445 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in IMR-32 cell line. Negative control: THP-1. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2ug/ml) dilution.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [RM1032] (ab314906)

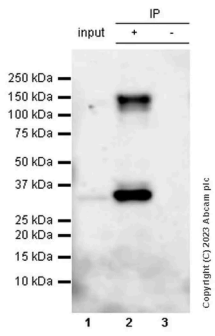
Pan Trk Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human kidney using rabbit Anti-Pan Trk antibody

Immunohistochemical analysis of paraffin-embedded human kidney tissue labeling Pan Trk with ab314906 at 1/500 (0.978 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on human kidney. The section was incubated with ab314906 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). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [RM1032] (ab314906)

Immunohistochemical analysis of paraffin-embedded human cerebrum tissue labeling Pan Trk with ab314906 at 1/500 (0.978 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human cerebrum. The section was incubated with ab314906 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). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906)

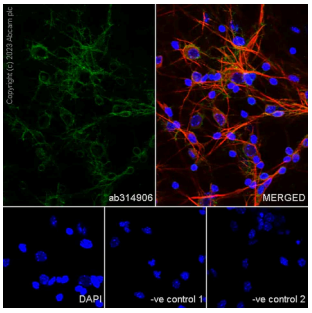
Pan Trk was immunoprecipitated from 0.35 mg IMR-32 (human neuroblastoma neuroblast) whole cell lysate with ab314906 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314906 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: IMR-32 (human neuroblastoma neuroblast) whole cell lysate Lane 2: ab314906 IP in IMR-32 (human neuroblastoma neuroblast) whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab314906 in IMR-32 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/30 dilution

All lanes:
IMR-32 (human neuroblastoma neuroblast) whole cell lysate

Secondary

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

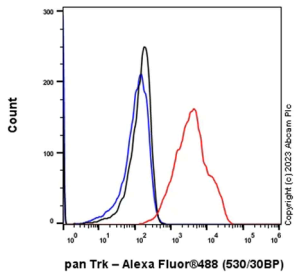
Exposure time: 84s



Immunocytochemistry/ Immunofluorescence - Anti-Pan Trk antibody [RM1032] (ab314906)

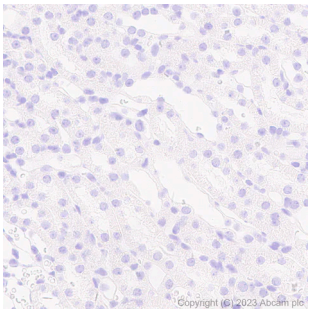
Pan Trk Immunocytochemistry/ Immunofluorescence staining of mouse primary neural/glia cell using rabbit Anti-Pan Trk antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized mouse primary neural/glia cell cells labelling Pan Trk with ab314906 at 1/200 (2.445 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 (2ug/ml) dilution (Green). Confocal image showing cytoplasmic staining in mouse primary neural/glia cell line. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab11267 Anti-MAP2 mouse monoclonal antibody was used to counterstain at 1/500 (4ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 (2ug/ml) dilution.



Flow Cytometry (Intracellular) - Anti-Pan Trk antibody [RM1032] (ab314906)

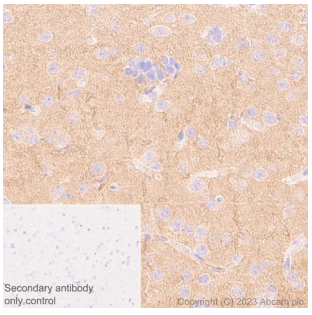
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized rat primary neuron cell cells labelling Pan Trk with ab314906 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [RM1032] (ab314906)

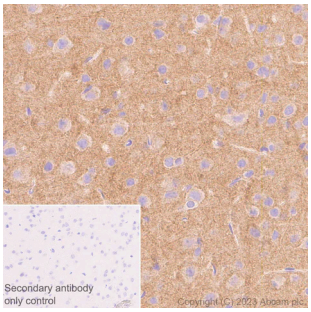
Pan Trk Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse kidney using rabbit Anti-Pan Trk antibody

Immunohistochemical analysis of paraffin-embedded mouse kidney tissue labeling Pan Trk with ab314906 at 1/1000 (0.489 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on mouse kidney. The section was incubated with ab314906 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). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



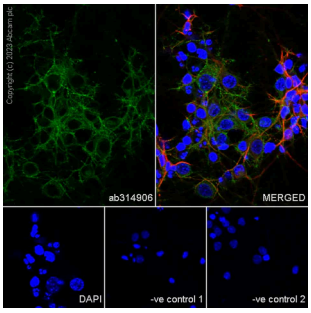
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pan Trk antibody [RM1032] (ab314906)

Immunohistochemical analysis of paraffin-embedded rat cerebrum tissue labeling Pan Trk with ab314906 at 1/1000 (0.489 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on rat cerebrum. The section was incubated with ab314906 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). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



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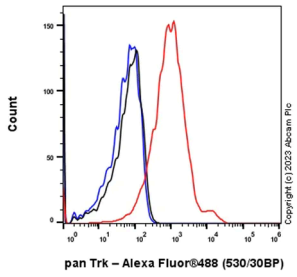
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Immunocytochemistry/ Immunofluorescence - Anti-Pan Trk antibody [RM1032] (ab314906)

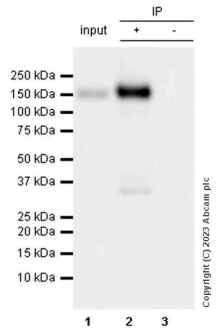
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Flow Cytometry (Intracellular) - Anti-Pan Trk antibody [RM1032] (ab314906)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized mouse primary neuron cells cells labelling Pan Trk with ab314906 at 1/500 dilution (0.1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906)

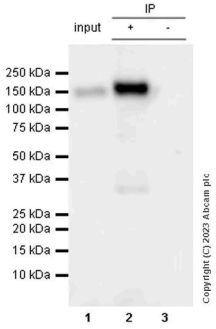
Pan Trk was immunoprecipitated from 0.35 mg rat brain tissue lysate with ab314906 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314906 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: Rat brain tissue lysate Lane 2: ab314906 IP in Rat brain tissue lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab314906 in rat brain tissue lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/30 dilution

All lanes:
Rat brain tissue lysate

Secondary

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

Exposure time: 10s



Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906)

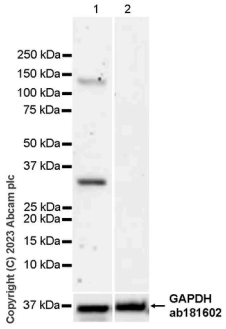
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All lanes:
Immunoprecipitation - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/30 dilution

All lanes:
Mouse brain tissue lysate

Secondary

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

Exposure time: 10s



Western blot - Anti-Pan Trk antibody [RM1032] (ab314906)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Negative control: THP-1. In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.
All lanes:
Western blot - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/1000 dilution

Lane 1:
IMR-32 (human neuroblastoma neuroblast) whole cell lysate at 20 µg

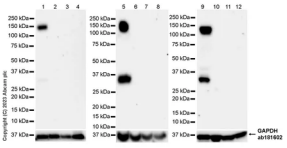
Lane 2:
THP-1 (human monocytic leukemia monocyte) whole cell lysate at 20 µg

Secondary

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

Observed band size: 140 kDa, 32 kDa, 36 kDa

Exposure time: 180s



Western blot - Anti-Pan Trk antibody [RM1032] (ab314906)

Pan Trk Western blot staining using rabbit Anti-Pan Trk antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST Negative control: heart, kidney, spleen (PMID: 7823156). TrkB is abundantly expressed in the central and peripheral nervous system. The 30KDa band is an intracellular fragment TrkB-ICD, and the observed Mw of ~120KDa is

higher than the predicted Mw due to glycosylation (PMID:24860020). In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution.
All lanes:
Western blot - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/1000 dilution

Lane 1:
Human cerebellum tissue lysate at 20 µg

Lane 2:
Human heart tissue lysate at 20 µg

Lane 3:
Human kidney tissue lysate at 20 µg

Lane 4:
Human spleen tissue lysate at 20 µg

Lane 5:
Mouse brain tissue lysate at 20 µg

Lane 6:
Mouse heart tissue lysate at 20 µg

Lane 7:
Mouse kidney tissue lysate at 20 µg

Lane 8:
Mouse spleen tissue lysate at 20 µg

Lane 9:
Rat brain tissue lysate at 20 µg

Lane 10:
Rat heart tissue lysate at 20 µg

Lane 11:
Rat kidney tissue lysate at 20 µg

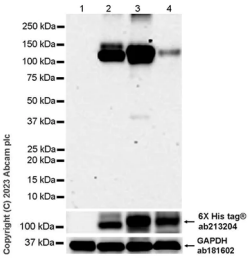
Lane 12:
Rat spleen tissue lysate at 20 µg

Secondary

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

Observed band size: 140 kDa, 32 kDa, 36 kDa

Exposure time: 70s



Western blot - Anti-Pan Trk antibody [RM1032] (ab314906)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Samples are non-boiled as boiling may cause protein aggregation. In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution. In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution.
All lanes:
Western blot - Anti-Pan Trk antibody [RM1032] (ab314906) at 1/1000 dilution

Lane 1:

293T (human embryonic kidney epithelial cell) transfected with an empty vector (vector control) containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 2:
293T transfected with human TrkA expression vector containing a myc-His-tag®, whole cell lysate at 10 µg

Lane 3:
293T transfected with human TrkB expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Lane 4:
293T transfected with human TrkC expression vector containing a myc-His-tag®, whole cell lysate at 20 µg

Secondary

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

Observed band size: 120 kDa, 36 kDa

Exposure time: 180s

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