abcam

Product datasheet

Anti-TrkB (phospho Y705) antibody [EPR22298-67] ab229908

Recombinant RabMAb

4 Images

Overview

Product name	Anti-TrkB (phospho Y705) antibody [EPR22298-67]
Description	Rabbit monoclonal [EPR22298-67] to TrkB (phospho Y705)
Host species	Rabbit
Tested applications	**Suitable for:** Dot blot, WB **Unsuitable for:** CHIPseq,ICC/IF or IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide within Mouse TrkB aa 650-750. The exact sequence is proprietary. Database link: P15209
Positive control	WB: HEK-293T transfected with mouse TrkB; HEK-293T transfected with human TrkB; PC-12 cells treated with 100ng/ml NGF.
General notes	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 production For more information see here. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR22298-67
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab229908** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

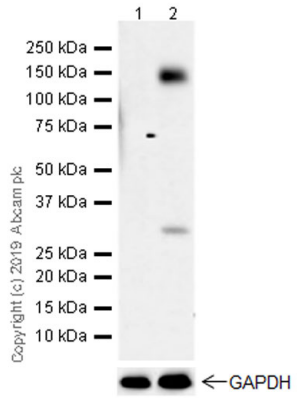
Application	Abreviews	Notes
Dot blot		1/1000.
WB		1/1000. Predicted molecular weight: 92 kDa.

Application notes	Is unsuitable for CHIPseq,ICC/IF or IHC-P.

Target

Function	Receptor for brain-derived neurotrophic factor (BDNF), neurotrophin-3 and neurotrophin-4/5 but not nerve growth factor (NGF). Involved in the development and/or maintenance of the nervous system. This is a tyrosine-protein kinase receptor. Known substrates for the TRK receptors are SHC1, PI-3 kinase, and PLC-gamma-1.
Tissue specificity	Isoform TrkB is widely expressed, mainly in the nervous tissue. In the CNS, expression is observed in the cerebral cortex, hippocampus, thalamus, choroid plexus, granular layer of the cerebellum, brain stem, and spinal cord. In the peripheral nervous system, it is expressed in many cranial ganglia, the ophtalmic nerve, the vestibular system, multiple facial structures, the submaxillary glands, and dorsal root ganglia. Isoform TrkB-T1 is expressed in multiple tissues, mainly in brain, pancreas, kidney and heart. Isoform TrkB-T-Shc is predominantly expressed in brain.
Sequence similarities	Belongs to the protein kinase superfamily. Tyr protein kinase family. Insulin receptor subfamily. Contains 2 Ig-like C2-type (immunoglobulin-like) domains. Contains 2 LRR (leucine-rich) repeats. Contains 1 LRRCT domain. Contains 1 LRRNT domain. Contains 1 protein kinase domain.
Post-translational modifications	Ligand-mediated auto-phosphorylation.
Cellular localization	Membrane.

Images



Western blot - Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908)

All lanes : Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908) at 1/1000 dilution

Lane 1 : Untreated PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 10 µg
Lane 2 : PC-12 treated with 100ng/ml NGF (ab9796) for 5 minutes at 20 µg

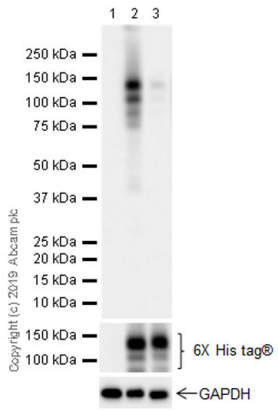
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 92 kDa
Observed band size: 140 kDa
why is the actual band size different from the predicted?

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The phosphorylation sites are conserved between TrkA and TrkB: Tyr674/675 of TrkA corresponds to Tyr706/707 in TrkB. Therefore, the TrkB (phospho T705) antibody can detect the phosphorylation of TrkA T674/675 in PC-12 cells treated with NGF. The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 23951412).

Exposure time: 3 minutes



Western blot - Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908)

All lanes : Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908) at 1/5000 dilution

Lane 1 : HEK-293T (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate
Lane 2 : HEK-293T transfected with human TrkB (WT) expression vector containing a myc-His-tag®, whole cell lysate (Untreated membrane)
Lane 3 : HEK-293T transfected with human TrkB (WT) expression vector containing a myc-His-tag®, whole cell lysate (Phosphatase treated membrane)

Lysates/proteins at 10 µg per lane.

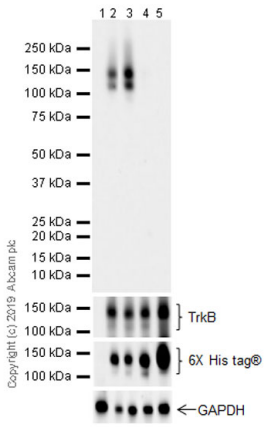
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 92 kDa
Observed band size: None kDa why is the actual band size different from the predicted?

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 24959744). Besides, TrkB auto-phosphorylation was observed when TrkB was over-expressed in HEK293 cells, which has been reported in the literature (PMID: 25632160).

Exposure time: 7 seconds



Western blot - Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908)

All lanes : Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908) at 1/5000 dilution

Lane 1 : HEK-293T (human embryonic kidney) transfected with an empty vector (vector control), containing a myc-His-tag®, whole cell lysate
Lane 2 : HEK-293T transfected with mouse TrkB (WT) expression vector containing a myc-His-tag®, starved for 6 hours, whole cell lysate
Lane 3 : HEK-293T transfected with mouse TrkB (WT) expression vector containing a myc-His-tag®, starved for 6 hours, then treated with 50ng/ml BDNF (ab9794) for 10 minutes, whole cell lysate (Untreated membrane)
Lane 4 : HEK-293T transfected with mouse TrkB (WT) expression vector containing a myc-His-tag®, starved for 6 hours, then treated with 50ng/ml BDNF (ab9794) for 10 minutes, whole cell lysate (Phosphatase treated membrane)
Lane 5 : HEK-293T transfected with mouse TrkB (mutant Y705A) expression vector containing a myc-His-tag®, whole cell lysate

Lysates/proteins at 10 µg per lane.

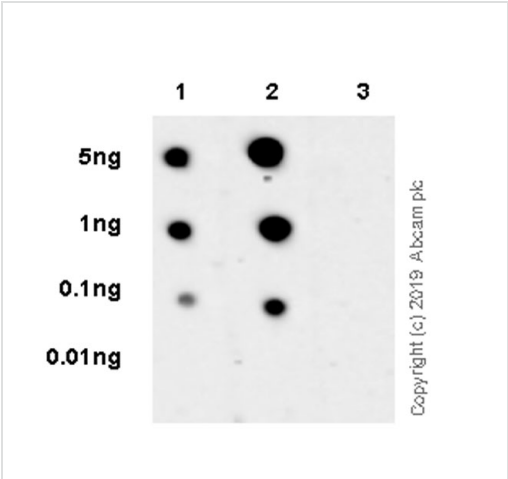
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 92 kDa
Observed band size: 140 kDa why is the actual band size different from the predicted?

Blocking and diluting buffer and concentration: 5% NFDM/TBST

The expression profile/ molecular weight observed is consistent with what has been described in the literature (PMID: 24959744). Besides, TrkB auto-phosphorylation was observed when TrkB was over-expressed in HEK293 cells, which has been reported in the literature (PMID: 25632160).

Exposure time: 48 seconds



Dot Blot - Anti-TrkB (phospho Y705) antibody [EPR22298-67] (ab229908)

Dot blot analysis using ab229908 at 1/1000 dilution, followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100,000 dilution.

Lane 1: TrkB (phospho T705) peptide (aa697-708)

Lane 2: TrkB (phospho T705) peptide (aa702-712)

Lane 3: TrkB non-phospho peptide (aa697-712)

Blocking/diluting buffer and concentration: 5% NFDM/TBST