abcam

ab248184

Anti-PTPRE antibody [EPR6715] - 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	EPR6715
Purification technique	Affinity purification
Dissociation constant	5.1 x 10^{-11} M
Concentration	1.052 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Mouse, Human, Rat

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Rat
Dilution info	-

Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information PTPRE

Function	Isoform 1 plays a critical role in signaling transduction pathways and phosphoprotein network topology in red blood cells. May play a role in osteoclast formation and function (By similarity). Isoform 2 acts as a negative regulator of insulin receptor (IR) signaling in skeletal muscle. Regulates insulin-induced tyrosine phosphorylation of insulin receptor (IR) and insulin receptor substrate 1 (IRS-1), phosphorylation of protein kinase B and glycogen synthase kinase-3 and insulin induced stimulation of glucose uptake (By similarity). Isoform 1 and isoform 2 act as a negative regulator of FceRI-mediated signal transduction leading to cytokine production and degranulation, most likely by acting at the level of SYK to affect downstream events such as phosphorylation of SLP76 and LAT and mobilization of Ca(2+).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab248184 is the carrier-free version of ab126788.

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	PTPRE also known as Protein Tyrosine Phosphatase Receptor Type E or PTPε acts as a tyrosine phosphatase that removes phosphate groups from specific tyrosine residues on proteins. This enzyme which has a molecular mass of approximately 83 kDa functions as a receptor-type phosphatase with roles in cell signaling. PTPRE is expressed across various tissues including high levels in the brain and testis suggesting diverse functional roles in different cellular contexts.

Biological function summary	Protein Tyrosine Phosphatase Receptor Type E regulates cellular processes such as growth differentiation and motility by modulating the phosphorylation state of key signaling components. PTPRE is not known as part of a specific protein complex but interacts with various proteins through its enzymatic activity. It maintains balance in cellular signal transduction processes by counterbalancing kinases which add phosphate groups. This regulatory role indicates its involvement in many critical cellular activities and responses.
Pathways	Protein Tyrosine Phosphatase Receptor Type E influences the MAPK/ERK pathway which plays an important role in cell division and the JAK/STAT signaling pathway important for immune response. In these pathways PTPRE interacts and regulates proteins such as ERK and STAT respectively. By modulating phosphorylation PTPRE influences pathway signaling outcomes and cellular responses to external stimuli showing its integrative role in controlling signal transduction dynamics.
Associated diseases and disorders	Protein Tyrosine Phosphatase Receptor Type E has been associated with cancer and autoimmune diseases. PTPRE's activity in dephosphorylating targets like ERK and STAT can impact cell proliferation and immune regulation linking it to tumor growth and immune dysregulation. In some cancers abnormal PTPRE activity interacts with other signaling proteins such as Src-family kinases influencing oncogenic processes. This association makes PTPRE a protein of interest for understanding and potentially targeting disease mechanisms.

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

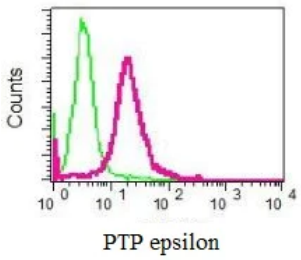
We do not recommend this combination. It is not covered by our product promise.

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.

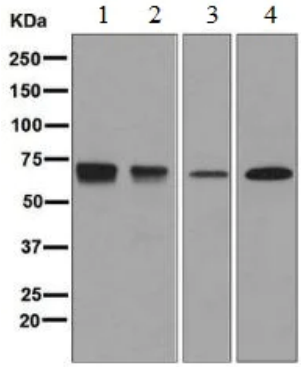
3 product images



Flow Cytometry (Intracellular) - Anti-PTPRE antibody [EPR6715] - BSA and Azide free (ab248184)

PTPRE Flow Cytometry (Intracellular) staining using rabbit Anti-PTPRE antibody

This data was developed using ab126788, the same antibody clone in a different buffer formulation.
ab126788 at 1/10 dilution staining PTPRE in permeabilized HL60 cells by intracellular flow cytometry (red) compared with a rabbit IgG negative control (green).



Western blot - Anti-PTPRE antibody [EPR6715] - BSA and Azide free (ab248184)

PTPRE Western blot staining using rabbit Anti-PTPRE antibody

This data was developed using ab126788, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-PTPRE antibody [EPR6715] (ab126788) at 1/1000 dilution

Lane 1:
HL60 cell lysate, treated with TPA at 10 µg

Lane 2:
HL60 cell lysate at 10 µg

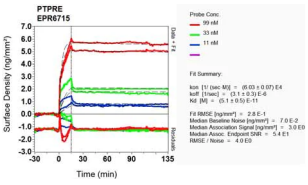
Lane 3:
HeLa cell lysate at 10 µg

Lane 4:
C2C12 cell lysate at 10 µg

Secondary

All lanes:
HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 81 kDa



OI-RD Scanning - Anti-PTPRE antibody [EPR6715] - BSA and Azide free (ab248184)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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