

Product datasheet

Anti-PTP epsilon antibody [3E1] ab123902

3 Images

Overview

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<b>Product name</b>	Anti-PTP epsilon antibody [3E1]
<b>Description</b>	Mouse monoclonal [3E1] to PTP epsilon
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> IHC-P, Flow Cyt, ICC/IF
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Recombinant full length, Human PTP epsilon produced in HEK293T cells (NP_006495).
<b>Positive control</b>	Human liver tissue; COS7 cells transiently transfected with pCMV6-ENTRY PTP epsilon; HEK293T cells transfected with a PTP epsilon overexpress plasmid
<b>General notes</b>	Dilute in PBS (pH7.3) before use. Stable for 12 months from date of receipt.

Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
<b>Storage buffer</b>	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: 48% PBS, 50% Glycerol, 1% BSA
<b>Purity</b>	Protein G purified
<b>Purification notes</b>	ab123902 was purified from mouse ascites fluids by affinity chromatography.
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	3E1
<b>Isotype</b>	IgG1

Applications

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Our [Abpromise guarantee](#) covers the use of **ab123902** 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
IHC-P		1/50 - 1/150.
Flow Cyt		1/100. <a href="#">ab170190</a> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
ICC/IF		1/100.

## Target

### 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.

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.

Isoform 1 and isoform 2 act as a negative regulator of FcεRI-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+).

### Tissue specificity

Expressed in giant cell tumor (osteoclastoma rich in multinucleated osteoclastic cells).

### Sequence similarities

Belongs to the protein-tyrosine phosphatase family. Receptor class 4 subfamily. Contains 2 tyrosine-protein phosphatase domains.

### Domain

The tyrosine-protein phosphatase 2 domain (D2) mediates dimerization. The extreme N- and C-termini of the D2 domain act to inhibit dimerization and removal of these sequences increases dimerization and inhibits enzyme activity.

### Post-translational modifications

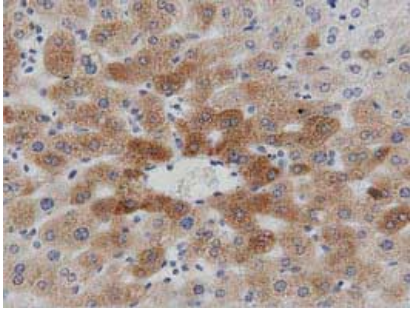
A catalytically active cytoplasmic form (p65) is produced by proteolytic cleavage of either isoform 1, isoform 2 or isoform 3.

Isoform 1 and isoform 2 are phosphorylated on tyrosine residues by tyrosine kinase Neu. Isoform 1 is glycosylated.

### Cellular localization

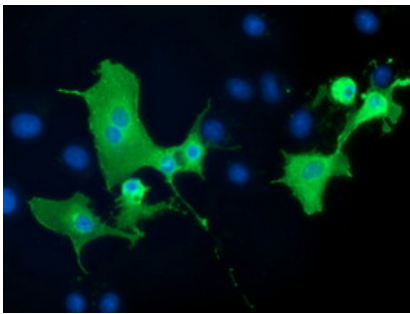
Cytoplasm; Cell membrane and Cytoplasm. Predominantly cytoplasmic. A small fraction is also associated with nucleus and membrane. Insulin induces translocation to the membrane.

## Images



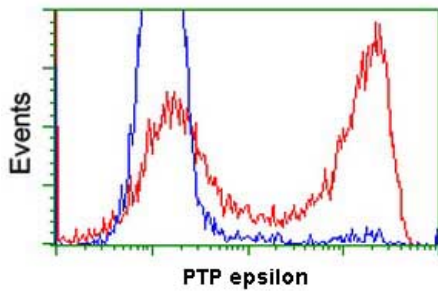
ab123902, at 1/50 dilution, staining PTP epsilon in paraffin-embedded Human liver tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP epsilon antibody [3E1] (ab123902)



ab123902, at 1/100 dilution, staining PTP epsilon in COS7 cells transiently transfected with pCMV6-ENTRY PTP epsilon by Immunofluorescence.

Immunocytochemistry/ Immunofluorescence - Anti-PTP epsilon antibody [3E1] (ab123902)



HEK293T cells transfected with either a PTP epsilon overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained using ab123902 at 1/100 dilution, and then analyzed by flow cytometry.

Flow Cytometry - Anti-PTP epsilon antibody [3E1] (ab123902)

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