

Product datasheet

Anti-PTP epsilon antibody [5F2] ab124411

8 Images

Overview

<b>Product name</b>	Anti-PTP epsilon antibody [5F2]
<b>Description</b>	Mouse monoclonal [5F2] to PTP epsilon
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P, 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>	PTP epsilon-transfected HEK293T cell lysate; Human breast adenocarcinoma, colon adenocarcinoma, Kidney, liver, liver carcinoma, and prostate tissues; COS7 cells transiently transfected by pCMV6-ENTRY PTP epsilon.
<b>General notes</b>	Dilute in PBS (pH7.3) before use.

Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term.
<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>	ab124411 is purified from Mouse ascites fluid by affinity chromatography.
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	5F2
<b>Isotype</b>	IgG1

Applications

Our [Abpromise guarantee](#) covers the use of **ab124411** 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
WB		1/1000. Predicted molecular weight: 81 kDa.
IHC-P		1/50.
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<sup>2+</sup>.

### 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

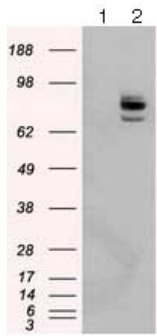
A catalytically active cytoplasmic form (p65) is produced by proteolytic cleavage of either isoform 1, isoform 2 or isoform 3.

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



Western blot - Anti-PTP epsilon antibody [5F2]  
(ab124411)

**All lanes :** Anti-PTP epsilon antibody [5F2]  
(ab124411) at 1/1000 dilution

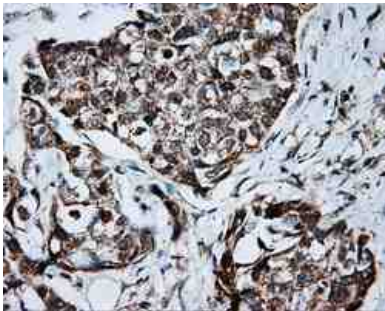
**Lane 1 :** HEK293T cell lysate transfected with  
pCMV6-ENTRY control cDNA

**Lane 2 :** HEK293T cell lysate transfected with  
pCMV6-ENTRY PTP epsilon cDNA

Lysates/proteins at 5 µg per lane.

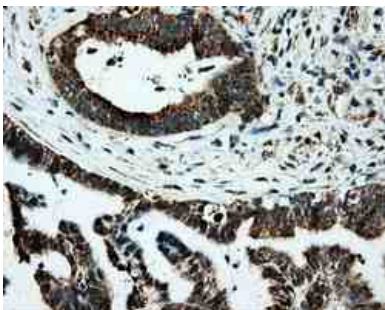
**Predicted band size:** 81 kDa

HEK293T cell lysates were generated from  
transient transfection of the cDNA clone  
(RC207950)



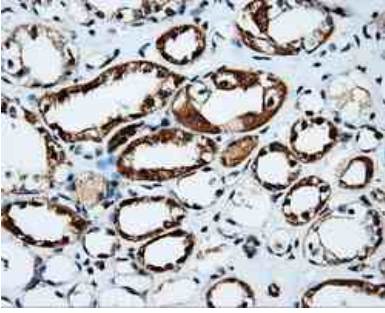
Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-PTP epsilon antibody  
[5F2] (ab124411)

ab124411 at 1/50 dilution staining PTP  
epsilon in Paraffin-embedded Human breast  
adenocarcinoma tissue by  
Immunohistochemistry.



Immunohistochemistry (Formalin/PFA-fixed paraffin-  
embedded sections) - Anti-PTP epsilon antibody  
[5F2] (ab124411)

ab124411 at 1/50 dilution staining PTP  
epsilon in Paraffin-embedded Human colon  
adenocarcinoma tissue by  
Immunohistochemistry.



ab124411 at 1/50 dilution staining PTP epsilon in Paraffin-embedded Human kidney tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP epsilon antibody [5F2] (ab124411)



Staining of PTP epsilon in Paraffin-embedded Human liver tissue by Immunohistochemistry using ab124411 at a dilution of 1/50.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP epsilon antibody [5F2] (ab124411)



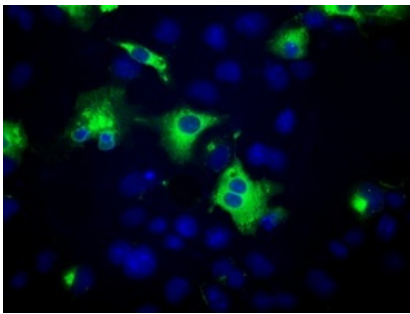
ab124411 at 1/50 dilution staining PTP epsilon in Paraffin-embedded Human kidney carcinoma tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP epsilon antibody [5F2] (ab124411)



ab124411 at 1/50 dilution staining PTP epsilon in Paraffin-embedded Human prostate tissue by Immunohistochemistry.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-PTP epsilon antibody [5F2] (ab124411)



ab124411 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 [5F2] (ab124411)

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