



Mouse Anti-PP-1B antibody

SL0133M

Product Name PP-1B**Chinese Name** 蛋白磷酸酯酶-1B 抗体**Alias**

Protein phosphatases-1; PP-1 gamma, beta, alpha, catalytic subunit; MGC3672; PP 1B; PP-1B; PPP1CB; PP1B; PPP1CD; PP1beta; Protein phosphatase 1 beta; Protein phosphatase 1 catalytic subunit beta isoform; Protein phosphatase 1 delta; Serine threonine protein phosphatase PP1 beta catalytic subunit; Serine/threonine-protein phosphatase PP1-beta catalytic subunit; PP1B_HUMAN; Protein phosphatase 1, catalytic subunit, beta isozyme; Protein phosphatase 1, catalytic subunit, delta isoform;

Research Area

Cell biology Neurobiology Signal transduction Apoptosis Kinases and Phosphatases

Immunogen Species

Mouse

Clonality

Polyclonal

React Species

Rat, (predicted: Human, Mouse, Cow, Horse, Rabbit,)

Applications

IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 (Paraffin sections need antigen repair)
not yet tested in other applications.
optimal dilutions/concentrations should be determined by the end user.

Theoretical molecular weight

37kDa

Cellular localization

The nucleus

Form

Liquid

Concentration 1mg/ml**immunogen**

KLH conjugated synthetic peptide derived from human PP-1B: 155-250/327

Lsotype

IgG

Purification

affinity purified by Protein A

Buffer Solution

1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.

Storage

Shipped at 4°C. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.

Attention

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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The phosphorylation and de phosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/ threonine protein phosphatases. The protein phosphatases (PP) holoenzyme is a trimertic complex composed of a regulatory subunit, a variable subunit and a catalytic subunit. Four major families of protein phosphatase catalytic subunits have been identified and are designated PP1, PP2A, PP2B (calcineurin) and PP2C. An additional protein phosphatase catalytic subunit, PPX or PP4, is the member of a potentially novel PP family. The PP1 family is composed of subfamily members PP1 alpha, PP1 beta, and PP1 gamma. The PP2A family is composed of subfamily members PP2A alpha, and PP2A beta. The PP2B family is composed of subfamily members PP2B-A alpha, PP2B-A beta and PP2B-A gamma. The PP2C family is composed of PP2C alpha, PP2C beta, PP2C gamma. Wip1, a protein identified in the p53 DNA response pathway, has also been identified as a potential member of the PP2C family. Regulatory subunits include nuclear inhibitor of PP1 (NIPP1), PP2A-A alpha and A beta, PP2A-B alpha and B beta, PP2A-C alpha and C beta, PP2A-B56-alpha and B56 beta, PR48 and PP2B-B1 and B2.

**Product
Detail**

Function:

Protein phosphatase that associates with over 200 regulatory proteins to form highly specific holoenzymes which dephosphorylate hundreds of biological targets. Protein phosphatase (PP1) is essential for cell division, it participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. Component of the PTW/PP1 phosphatase complex, which plays a role in the control of chromatin structure and cell cycle progression during the transition from mitosis into interphase.

Subunit:

PP1 comprises a catalytic subunit, PPP1CA, PPP1CB or PPP1CC, which is folded into its native form by inhibitor 2 and glycogen synthetase kinase 3, and then complexed to one or several targeting or regulatory subunits. The targeting or regulatory subunits determine the substrate specificity of PP1. PPP1R12A, PPP1R12B and PPP1R12C mediate binding to myosin. PPP1R3A (in skeletal muscle), PPP1R3B (in liver), PPP1R3C, PPP1R3D and PPP1R3F (in brain) mediate binding to glycogen. Part of a complex containing PPP1R15B, PP1 and NCK1/2 (By similarity). Component of the MLL5-L complex, at least composed of MLL5, STK38, PPP1CA, PPP1CB, PPP1CC, HCFC1, ACTB and OGT. Interacts with PPP1R7 and PPP1R12C. PPP1R15A and PPP1R15B mediate binding to EIF2S1. Interacts with PPP1R16B. Component of the PTW/PP1 phosphatase complex, composed of PPP1R10/PNUTS, TOX4, WDR82,

and PPP1CA or PPP1CB or PPP1CC. Interacts with PPP1R8. Interacts with TRIM28; the interaction is weak. Interacts with PPP1R12A and NUAK1; the interaction is direct.

Subcellular Location:

Cytoplasm. Nucleus. Nucleus, nucleoplasm. Nucleus, nucleolus. Note=Highly mobile in cells and can be relocalized through interaction with targeting subunits. In the presence of PPP1R8 relocalizes from the nucleus to nuclear speckles.

Similarity:

Belongs to the PPP phosphatase family. PP-1 subfamily.

SWISS:

P62140

Gene ID:

5500

Database links:

[Entrez Gene: 5500](#) Human

[Entrez Gene: 19046](#) Mouse

[Entrez Gene: 25594](#) Rat

[Omim: 600590](#) Human

[SwissProt: P62140](#) Human

[SwissProt: P62141](#) Mouse

[SwissProt: P62142](#) Rat

[Unigene: 591571](#) Human

[Unigene: 702907](#) Human

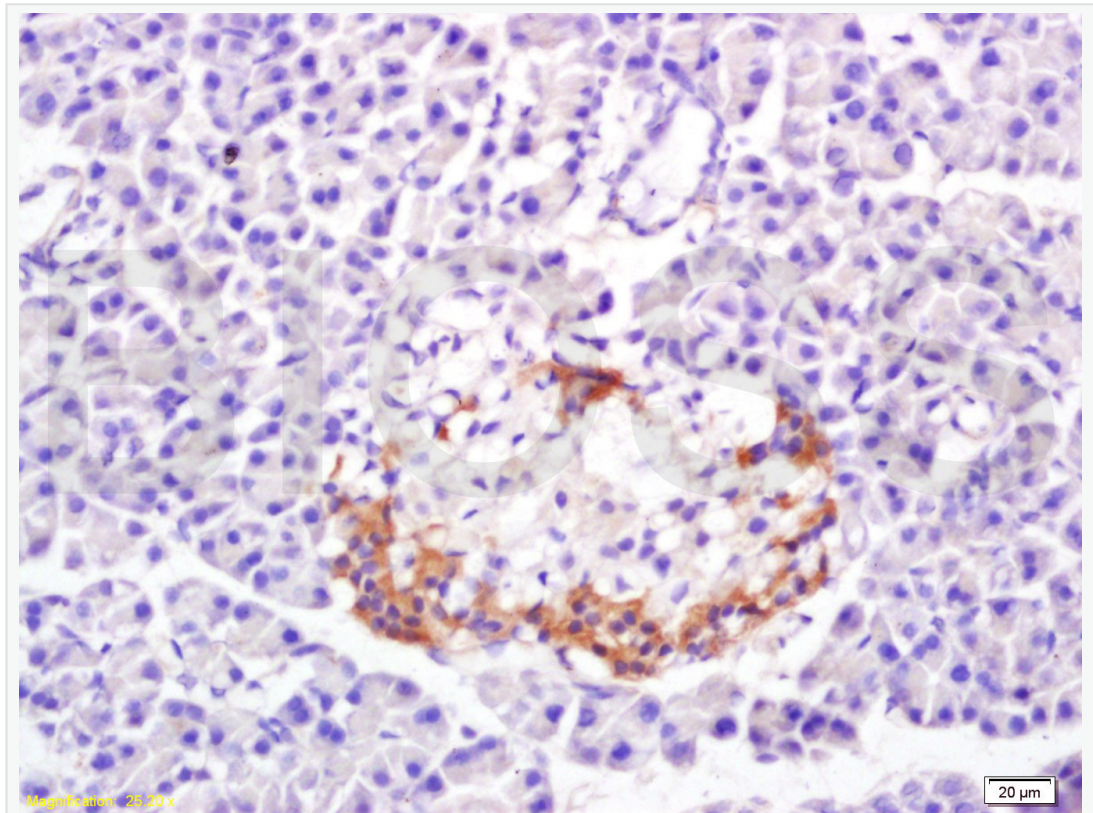
[Unigene: 241931](#) Mouse

[Unigene: 456635](#) Mouse

[Unigene: 128769](#) Rat

[Unigene: 39034](#) Rat

**Product
Picture**



Tissue/cell: rat pancreas tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;

Incubation: Anti-PP-1B Polyclonal Antibody, Unconjugated(SL0133M) 1:300, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0024) and DAB(C-0010) staining