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Immunotag™ PP1β Monoclonal Antibody

Antibody Specification

Catalog No.	ITM1078
Product Description	Immunotag™ PP1β Monoclonal Antibody
Size	50 µg, 100 µg
Conjugation	HRP, Biotin, FITC, Alexa Fluor® 350, Alexa Fluor® 405, Alexa Fluor® 488, Alexa Fluor® 555, Alexa Fluor® 594, Alexa Fluor® 647
IMPORTANT NOTE	This product is custom manufactured with a lead time of 3-4 weeks. Once in production, this item cannot be cancelled from an order and is not eligible for return.
Target Protein	PP1β
Clonality	Monoclonal
Storage/Stability	-20°C/1 year
Application	WB
Recommended Dilution	Western Blot: 1/1000 - 1/2000. Not yet tested in other applications.
Concentration	1 mg/ml
Reactive Species	Human,Mouse,Rat,Chicken,Dog,Pig
Host Species	Mouse
Immunogen	Purified recombinant human PP1β protein fragments expressed in Ecoli
Specificity	PP1β Monoclonal Antibody detects endogenous levels of PP1β protein.
Purification	Affinity purification
Form	Purified mouse monoclonal in buffer containing 0.1M Tris-Glycine (pH 7.4, 150 mM NaCl) with 0.2% sodium azide, 50% glycerol.
Gene Name	PPP1CB
Accession No.	P62140 P62141 P62142
Alternate Names	PPP1CB; Serine/threonine-protein phosphatase PP1-beta catalytic subunit; PP-1B; PPP1CD

Antibody Specification

Description	protein phosphatase 1 catalytic subunit beta(PPP1CB) Homo sapiens The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). PP1 is a serine/threonine specific protein phosphatase known to be involved in the regulation of a variety of cellular processes, such as cell division, glycogen metabolism, muscle contractility, protein synthesis, and HIV-1 viral transcription. Mouse studies suggest that PP1 functions as a suppressor of learning and memory. Two alternatively spliced transcript variants encoding distinct isoforms have been observed. [provided by RefSeq, Jul 2008],
Cell Pathway/ Category	Oocyte meiosis,Vascular smooth muscle contraction,Focal adhesion,Long-term potentiation,Regulates Actin and Cytoskeleton,Insulin_Receptor,Progesterone-mediated oocyte maturation,
Protein Expression	Epithelium,Platelet,Testis,Umbilical vein,Uterus,
Subcellular Localization	protein phosphatase type 1 complex,nuclear chromosome, telomeric region,nucleus,nucleoplasm,nucleolus,cytosol,focal adhesion,glycogen granule,extracellular exosome,MLL5-L complex,PTW/PP1 phosphatase complex,
Protein Function	catalytic activity:A phosphoprotein + H(2)O = a protein + phosphate.,cofactor:Binds 1 iron ion per subunit.,cofactor:Binds 1 manganese ion per subunit.,domain:The C-terminus is required for CDK2-activation, but not CDK2-binding.,enzyme regulation:The phosphatase activity of the PPP1R15A-PP1 complex toward EIF2S1 is specifically inhibited by Salubrinal, a drug that protects cells from endoplasmic reticulum stress.,function: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.,function:Regulates the G1/S phase transition of the cell cycle by binding and activating CDC2, CDK2 and CDKN1B/KIP1. Can activate CDK2 without promoting CDK2 phosphorylation. Mediates cell survival during the DNA damage process through activation of CDK2.,online information:The things we forget -Issue 32 of March 2003,similarity:Belongs to the PPP phosphatase family. PP-1 subfamily.,similarity:Belongs to the Speedy/Ringo family.,subunit:Interacts with CDC2, CDK2 and CDKN1B/KIP1. Found in a complex with both CDK2 and CDKN1B/KIP1.,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. PPP1R12A, PPP1R12B and PPP1R12C mediate binding to myosin. PPP1R3A, PPP1R3B, PPP1R3C and PPP1R3D mediate binding to glycogen. Part of a complex containing PPP1R15B, PP1 and NCK1/2 (By similarity). Interacts with PPP1R7 and PPP1R12C. PPP1R15A and PPP1R15B mediate binding to EIF2S1.,tissue specificity:Highly expressed in testis. Expressed at a low level in wide range of tissues including bone marrow, brain, heart, kidney, colon, liver, placenta, spleen, skeletal muscle, salivary gland, thyroid gland, thymus, trachea and uterus. Expressed at a slightly higher level in adrenal gland, cerebellum, small intestine, lung, prostate and trachea. Expression is cell cycle-dependent, being restricted to cells in G1/S phase.,
Usage	For Research Use Only! Not for diagnostic or therapeutic procedures.