



PP1 α / β Rabbit mAb

Catalog No	YP-rAb-17577
Isotype	IgG
Reactivity	Human,Mouse,Rat
Applications	WB,IHC,IF,IP,ELISA
Gene Name	PPP1CA;PPP1CB
Protein Name	Serine/threonine-protein phosphatase PP1-alpha catalytic subunit;Serine/threonine-protein phosphatase PP1-beta catalytic subunit;
Purification Process	Protein A
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Monoclonal, Rabbit,IgG
Dilution	IHC 1:200-1:1000; WB 1:2000-1:10000; IF 1:200-1:1000; ELISA 1:5000-1:20000; IP 1:50-1:200; Note: For IHC, we suggest antigen retrieval with TE buffer pH 9.0
Concentration	0.5 mg/ml
Purity	$\geq 90\%$
Storage Stability	-15° C to -25° C/1 year(Do not lower than -25° C)
Synonyms	PPP1CA ; PPP1A ; Serine/threonine-protein phosphatase PP1-alpha catalytic subunit ; PP-1A ; PPP1CB ; Serine/threonine-protein phosphatase PP1-beta catalytic subunit ; PP-1B ; PPP1CD ;
Observed Band	38kD
Calculated Molecular Weight	38kD
Cell Pathway	Cytoplasm, Nucleus
Tissue Specificity	Colon carcinoma,Liver,Lung,Muscle,Pancreas,Placenta,Platelet
Function	Catalytic activity:A phosphoprotein + H(2)O = a protein + phosphate.,Caution:The sequence shown here is derived from an Ensembl automatic analysis pipeline and should be considered as preliminary data.,cofactor:Binds 1 iron ion per subunit.,cofactor:Binds 1 manganese ion per subunit.,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 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, muscle contractility and protein synthesis. Involved in regulation of ionic conductances and long-term synaptic plasticity. May play an important role in dephosphorylating





substrates such as the postsynaptic density-associated Ca(2+)/calmodulin dependent protein kinase II.,online information:The things we forget -Issue 32 of March 2003,similarity:Belongs to the PPP phosphatase family.,similarity:Belongs to the PPP phosphatase family. PP-1 subfamily.,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. Interacts with PPP1R9A and PPP1R9B. Part of a complex containing PPP1R15B, PP1 and NCK1/2 (By similarity). Interacts with PPP1R7. PPP1R15A and PPP1R15B mediate binding to EIF2S1. Interacts with HHV-1 ICP34.5.,

Background

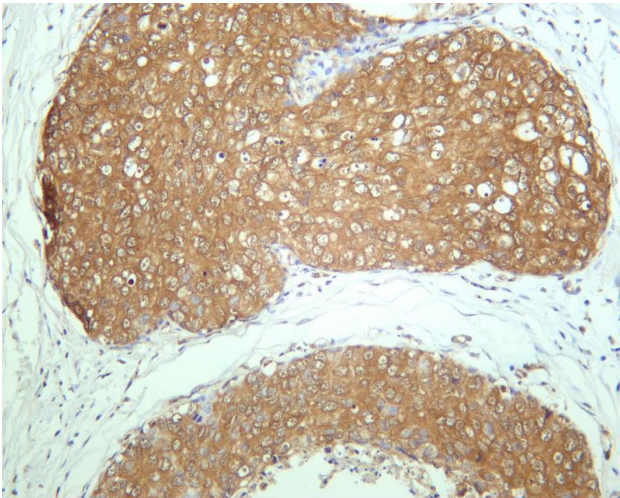
The protein encoded by this gene is one of the three catalytic subunits of protein phosphatase 1 (PP1). PP1 is a serine/threonine specific protein phosphatase known to be involved in the regulation of a variety of cellular processes, such as cell division, glycogen metabolism, muscle contractility, protein synthesis, and HIV-1 viral transcription. Increased PP1 activity has been observed in the end stage of heart failure. Studies in both human and mice suggest that PP1 is an important regulator of cardiac function. Mouse studies also suggest that PP1 functions as a suppressor of learning and memory. Three alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008],

matters needing attention

Avoid repeated freezing and thawing!

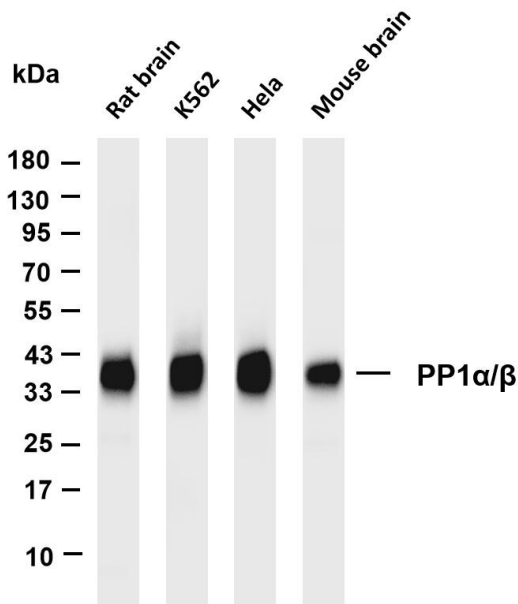
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

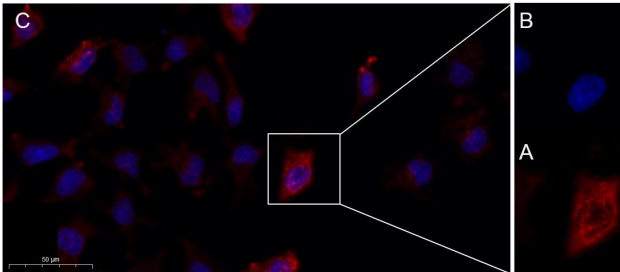


Human breast carcinoma was stained with anti-PP1 α / β rabbit antibody





Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-PP1 α/β antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: Rat brain Lane 2: K562 Lane 3: HeLa Lane 4: Mouse brain Predicted band size: 38kDa Observed band size: 38kDa



Immunofluorescence analysis of HeLa . Picture A: PP1 α/β Rabbit mAb (red). Picture B: DAPI (blue). Picture C: Merge of A+B

