

Product datasheet for **TA385024S**

PPP1A (PPP1CA) Rabbit Monoclonal Antibody [Clone ID: R04-8E4]

Product data:

Product Type:	Primary Antibodies
Clone Name:	R04-8E4
Applications:	IHC, IP, WB
Recommended Dilution:	WB: 1/2000-1/10000 IHC: 1/20 IP: 1/20
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Isotype:	IgG
Clonality:	Monoclonal
Immunogen:	A synthetic peptide of human PPP1CA+PPP1CB
Formulation:	50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40% Glycerol, 0.01% Sodium azide and 0.05% BSA
Concentration:	lot specific
Purification:	Affinity Purified
Conjugation:	Unconjugated
Storage:	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Stability:	1 year
Predicted Protein Size:	Calculated MW: 38 kDa; Observed MW: 38 kDa
Gene Name:	protein phosphatase 1 catalytic subunit alpha
Database Link:	Entrez Gene 5499 Human P62136



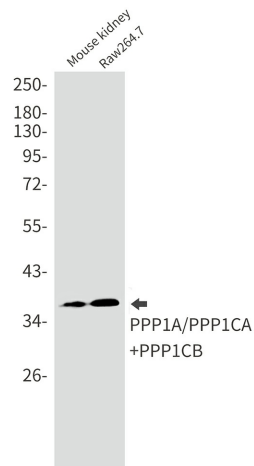
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Background:

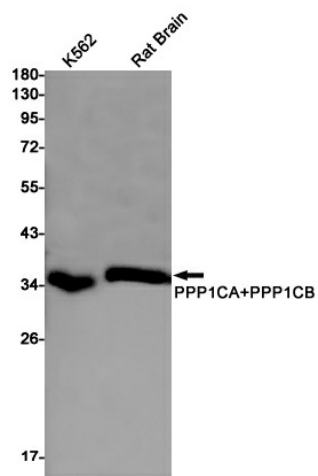
Swiss-Prot Acc.P62136. Protein phosphatase that associates with over 200 regulatory proteins to form highly specific holoenzymes which dephosphorylate hundreds of biological targets. Protein phosphatase 1 (PP1) is essential for cell division, and participates in the regulation of glycogen metabolism, 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 Ca²⁺/calmodulin dependent protein kinase II. 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. Regulates NEK2 function in terms of kinase activity and centrosome number and splitting, both in the presence and absence of radiation-induced DNA damage. Regulator of neural tube and optic fissure closure, and enteric neural crest cell (ENCCs) migration during development. In balance with CSNK1D and CSNK1E, determines the circadian period length, through the regulation of the speed and rhythmicity of PER1 and PER2 phosphorylation. May dephosphorylate CSNK1D and CSNK1E. Dephosphorylates the 'Ser-418' residue of FOXP3 in regulatory T-cells (Treg) from patients with rheumatoid arthritis, thereby inactivating FOXP3 and rendering Treg cells functionally defective (PubMed:23396208). Dephosphorylates CENPA (PubMed:25556658). Dephosphorylates the 'Ser-139' residue of ATG16L1 causing dissociation of ATG12-ATG5-ATG16L1 complex, thereby inhibiting autophagy (PubMed:26083323).

Synonyms:

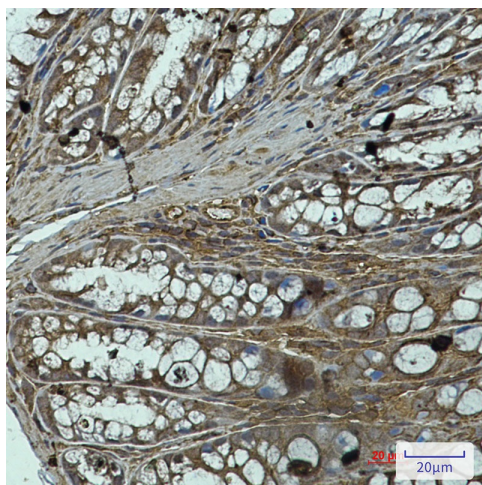
MGC1674; MGC15877; PP-1A; PP1A; PPP1A

Product images:

Western blot analysis of PPP1A/PPP1CA+PPP1CB in mouse kidney, Raw264.7 lysates using PPP1A/PPP1CA+PPP1CB antibody.



Western blot analysis of PPP1CA+PPP1CB in K562, rat Brain lysates using PPP1CA+PPP1CB antibody



Immunohistochemistry analysis of paraffin-embedded mouse colon using PP1C alpha/beta antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.