

Anti-PP1C alpha (1H1) Mouse Monoclonal Antibody

Introduction

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).

Product parameters

Alternative Names	Alpha isoform serine threonine protein phosphatase PP1alpha 1 catalytic subunit; Catalytic subunit; PP1A; PP1A_HUMAN; PP1alpha; PP2C ALPHA; PP2CA; Ppp1ca; Protein Phosphatase 2C Alpha Isoform; Serine threonine protein phosphatase PP1 alpha catalytic subunit; Serine threonine protein phosphatase PP1 alpha catalytic subunit protein phosphatase 1; Serine/threonine-protein phosphatase PP1-alpha catalytic subunit.
Gene ID	5499
Gene Name	PPP1CA
SwissProt ID	P62136
Host	Mouse
Reactivity	Human
Molecular Weight	Calculated MW: 38 kDa; Observed MW: 38 kDa
Conjugation	Unconjugated
Ex	-
Em	-

Modification	Unmodified
Clonality	IgG1
Isotype	Monoclonal Antibody
Clonality No.	AP-15C2E4
Form	Liquid
Concentration	See label
Carrier	Carrier Not Free
Immunogen	Purified recombinant human PPP1A protein fragments expressed in E.coli.
Purification	Affinity Purified
Buffer System	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.
Application	WB, ICC/IF
Dilution Ratio	WB: 1/500-1/1000 IF: 1/50-1/200
Research Field	Signal Transduction
Product Categories	Primary antibody
Shipping	Blue ice
Storage	-20°C
Expiration Date	12 months
Note	Please avoid freeze-thaw cycles.



Protocol

Configure the product according to the application range and recommended dilution ratio.

***Note:** The primary antibody dilution buffer options: WB - Primary Antibody Dilution Buffer (Cat. #: K1200, Not for HRP/AP conjugated antibodies), Immunostaining - Immunol Staining Primary Antibody Dilution Solution (Cat. #: K4655).

Note

1. This product is for scientific research use only.





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