

ARG54006 anti-PPP1A antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes PPP1CA
Tested Reactivity	Hu
Tested Application	ICC/IF, IHC-P, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Target Name	PPP1A
Species	Human
Immunogen	Purified recombinant human PPP1A protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	PP-1A; PPP1A; Serine/threonine-protein phosphatase PP1-alpha catalytic subunit; EC 3.1.3.16; PP1A; PP1alpha

Application Instructions

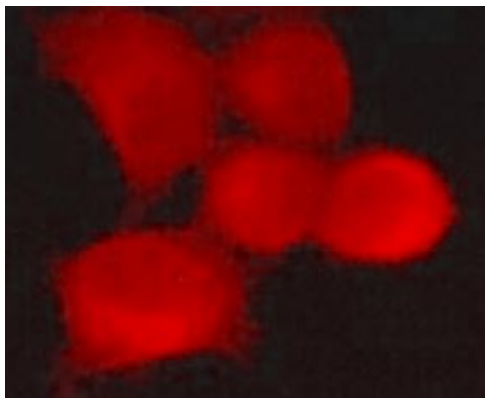
Application table	Application	Dilution
	ICC/IF	1:300
	IHC-P	Assay-dependent
	WB	1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	38 kDa	

Properties

Form	Liquid
Purification	Affinity purified
Buffer	0.1M Tris-Glycine (pH 7.4), 150 mM NaCl, 0.2% Sodium azide and 50% Glycerol
Preservative	0.2% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

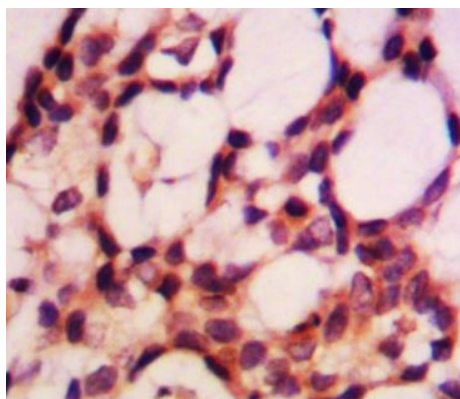
Bioinformation

Database links	GeneID: 5499 Human Swiss-port # P62136 Human
Gene Symbol	PPP1CA
Gene Full Name	protein phosphatase 1, catalytic subunit, alpha isozyme
Background	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. 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.
Function	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 Ca(2+)/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). [UniProt]
Research Area	Cancer antibody; Cell Biology and Cellular Response antibody; Gene Regulation antibody; Metabolism antibody; Signaling Transduction antibody
Calculated Mw	38 kDa
PTM	Phosphorylated. Dephosphorylated at Thr-320 in the presence of ionizing radiation.
Cellular Localization	Cytoplasm. Nucleus. Nucleus



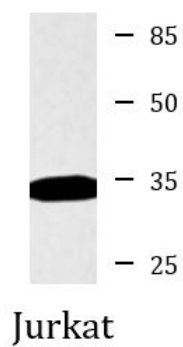
ARG54006 anti-PPP1A antibody ICC/IF image

Immunofluorescence: HeLa cells stained with ARG54006 anti-PPP1A antibody at 1:300 dilution.



ARG54006 anti-PPP1A antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human breast cancer tissue stained with ARG54006 anti-PPP1A antibody at 1:500 - 1:1000 dilution.



ARG54006 anti-PPP1A antibody WB image

Western blot: Jurkat cell lysate stained with ARG54006 anti-PPP1A antibody at 1:1000 dilution.