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Protein Phosphatase 4C Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52663

Product Information

Application	WB, ICC, IHC
Primary Accession	P60510
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	35080

Additional Information

Gene ID	5531
Other Names	PP X;PP-X;PP4;PP4C;PP4C;PP4C_HUMAN;PPH3;PPP4;ppp4c;PPX;protein phosphatase 4 (formerly X), catalytic subunit;Protein phosphatase 4 catalytic subunit;Protein phosphatase X; Protein phosphatase X;protein phosphatase X, catalytic subunit;Serine/threonine protein phosphatase 4 catalytic subunit;Serine/threonine-protein phosphatase 4 catalytic subunit.
Dilution	WB~~1:200 ICC~~1:200 IHC~~1:100
Format	Purified mouse monoclonal in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PPP4C
Synonyms	PPP4, PPX
Function	Protein phosphatase that is involved in many processes such as microtubule organization at centrosomes, maturation of spliceosomal snRNPs, apoptosis, DNA repair, tumor necrosis factor (TNF)-alpha signaling, activation of c-Jun N-terminal kinase MAPK8, regulation of histone acetylation, DNA damage checkpoint signaling, NF-kappa-B activation and cell migration. The PPP4C-PPP4R1 PP4 complex may play a role in dephosphorylation and regulation of HDAC3. The PPP4C-PPP4R2- PPP4R3A PP4 complex specifically dephosphorylates H2AX phosphorylated on Ser-140 (gamma-H2AX) generated during DNA replication and required for DNA double strand break repair. Dephosphorylates NDEL1 at CDK1 phosphorylation sites and negatively regulates CDK1 activity in interphase (By similarity). In response to DNA

	damage, catalyzes RPA2 dephosphorylation, an essential step for DNA repair since it allows the efficient RPA2-mediated recruitment of RAD51 to chromatin.
Cellular Location	Cytoplasm. Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome

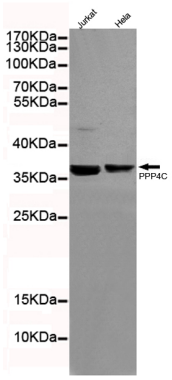
Background

Protein phosphatase that is involved in many processes such as microtubule organization at centrosomes, maturation of spliceosomal snRNPs, apoptosis, DNA repair, tumor necrosis factor (TNF)-alpha signaling, activation of c-Jun N-terminal kinase MAPK8, regulation of histone acetylation, DNA damage checkpoint signaling, NF-kappa-B activation and cell migration. The PPP4C- PPP4R1 PP4 complex may play a role in dephosphorylation and regulation of HDAC3. The PPP4C-PPP4R2-PPP4R3A PP4 complex specifically dephosphorylates H2AFX phosphorylated on Ser-140 (gamma-H2AFX) generated during DNA replication and required for DNA double strand break repair. Dephosphorylates NDEL1 at CDK1 phosphorylation sites and negatively regulates CDK1 activity in interphase (By similarity). In response to DNA damage, catalyzes RPA2 dephosphorylation, an essential step for DNA repair since it allows the efficient RPA2-mediated recruitment of RAD51 to chromatin.

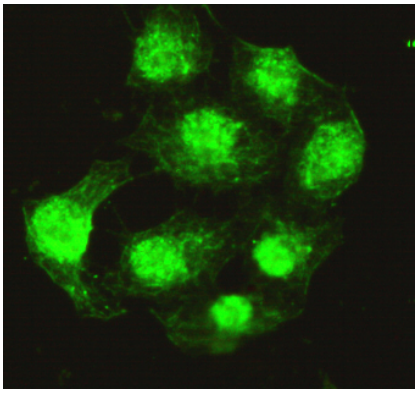
References

Brewis N.D.,et al.Biochim. Biophys. Acta 1171:231-233(1992).
Cohen P.T.W.,et al.Submitted (DEC-1998) to the EMBL/GenBank/DDBJ databases.
Hu M.C.-T.,et al.J. Biol. Chem. 273:33561-33565(1998).
Zhou G.,et al.J. Biol. Chem. 277:6391-6398(2002).
Mourtada-Maarabouni M.,et al.Cell Death Differ. 10:1016-1024(2003).

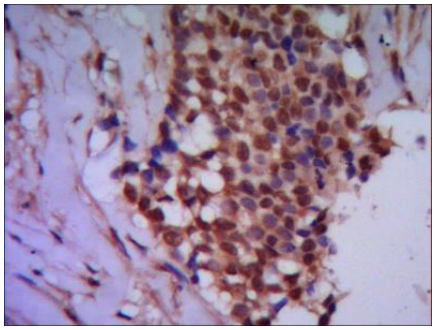
Images



Western blot detection of Protein Phosphatase 4C in Hela and Jurkat cell lysates using Protein Phosphatase 4C mouse mAb (1:200 diluted).Predicted band size: 34KDa.Observed band size: 34KDa.



Immunocytochemistry of HeLa cells using anti-Protein Phosphatase 4C mouse mAb diluted 1:200.



IHC of paraffin-embedded human breast cancer using anti-Protein Phosphatase 4C mouse mAb diluted 1/500-1/1000.