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PPP2R4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1658a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	Q15257
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	4D9
Isotype	IgG1
Calculated MW	40668
Description	Protein phosphatase 2A is one of the four major Ser/Thr phosphatases and is implicated in the negative control of cell growth and division. Protein phosphatase 2A holoenzymes are heterotrimeric proteins composed of a structural subunit A, a catalytic subunit C, and a regulatory subunit B. The regulatory subunit is encoded by a diverse set of genes that have been grouped into the B/PR55, B'/PR61, and B''/PR72 families. These different regulatory subunits confer distinct enzymatic specificities and intracellular localizations to the holozenzyme. The product of this gene belongs to the B' family. This gene encodes a specific phosphotyrosyl phosphatase activator of the dimeric form of protein phosphatase 2A. Alternative splicing results in multiple transcript variants encoding different isoforms.
Immunogen	Purified recombinant fragment of human PPP2R4 expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	5524
Other Names	Serine/threonine-protein phosphatase 2A activator, 5.2.1.8, PP2A, subunit B', PR53 isoform, Phosphotyrosyl phosphatase activator, PTPA, Serine/threonine-protein phosphatase 2A regulatory subunit 4, Serine/threonine-protein phosphatase 2A regulatory subunit B', PPP2R4, PTPA
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PPP2R4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PTPA (HGNC:9308)
Synonyms	PPP2R4
Function	PPIases accelerate the folding of proteins. It catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides (By similarity). Acts as a regulatory subunit for serine/threonine-protein phosphatase 2A (PP2A) (PubMed:16916641, PubMed:36073231). Modulates PP2A activity or substrate specificity, probably by inducing a conformational change in the catalytic subunit, a proposed direct target of the PPIase (PubMed:16916641). Can reactivate inactive phosphatase PP2A-phosphatase methylesterase complexes (PP2A(i)) in presence of ATP and Mg(2+) (By similarity). Reversibly stimulates the variable phosphotyrosyl phosphatase activity of PP2A core heterodimer PP2A(D) in presence of ATP and Mg(2+) (in vitro) (PubMed:16916641). The phosphotyrosyl phosphatase activity is dependent of an ATPase activity of the PP2A(D):PPP2R4 complex (PubMed:16916641). Is involved in apoptosis; the function appears to be independent from PP2A (PubMed:17333320).
Cellular Location	Cytoplasm. Nucleus
Tissue Location	Widely expressed.

References

1. Stem Cells. 2010 May;28(5):874-84. 2. Mol Biol Cell. 2010 Mar 15;21(6):1140-52.

Images

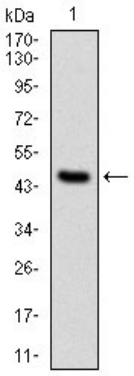


Figure 1: Western blot analysis using PPP2R4 mAb against human PPP2R4 (AA: 1-154) recombinant protein. (Expected MW is 41 kDa)

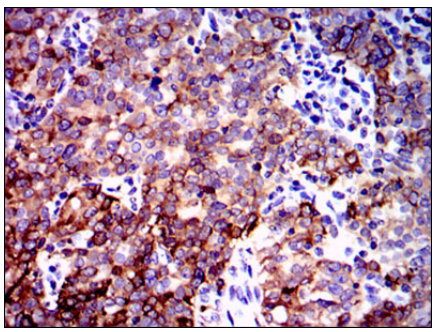
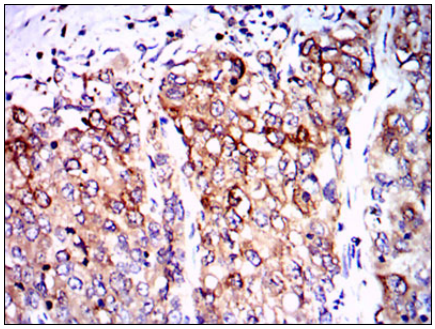


Figure 2: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using PPP2R4 mouse mAb with DAB staining.

Figure 3: Immunohistochemical analysis of paraffin-embedded lung cancer tissues using PPP2R4 mouse mAb with DAB staining.



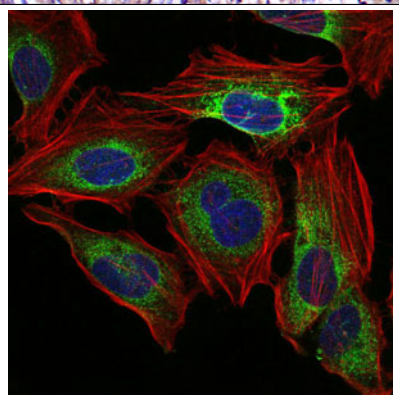


Figure 4: Immunofluorescence analysis of Hela cells using PPP2R4 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

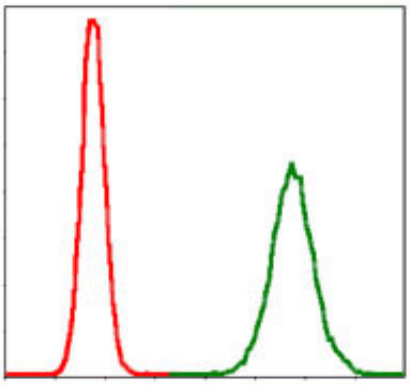


Figure 5: Flow cytometric analysis of MCF-7 cells using PPP2R4 mouse mAb (green) and negative control (red).

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