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PPM1D Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP13875C

Product Information

Application	WB, E
Primary Accession	O15297
Other Accession	Q9QZ67, NP_003611.1
Reactivity	Human
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB33957
Calculated MW	66675
Antigen Region	183-212

Additional Information

Gene ID	8493
Other Names	Protein phosphatase 1D, Protein phosphatase 2C isoform delta, PP2C-delta, Protein phosphatase magnesium-dependent 1 delta, p53-induced protein phosphatase 1, PPM1D, WIP1
Target/Specificity	This PPM1D antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 183-212 amino acids from the Central region of human PPM1D.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PPM1D Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PPM1D
Synonyms	WIP1

Function	Involved in the negative regulation of p53 expression (PubMed: 23242139). Required for the relief of p53-dependent checkpoint mediated cell cycle arrest. Binds to and dephosphorylates 'Ser-15' of TP53 and 'Ser-345' of CHEK1 which contributes to the functional inactivation of these proteins (PubMed:15870257, PubMed:16311512). Mediates MAPK14 dephosphorylation and inactivation (PubMed:21283629). Is also an important regulator of global heterochromatin silencing and critical in maintaining genome integrity (By similarity).
Cellular Location	Nucleus. Cytoplasm, cytosol
Tissue Location	Expressed in fetal and adult brain. Also detected in fetal liver and skeletal muscle, but not in their adult counterparts.

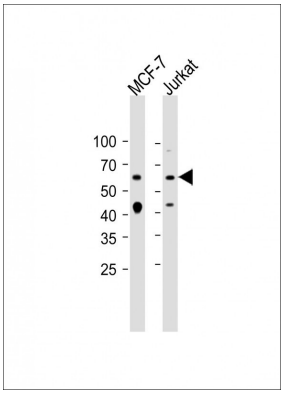
Background

The protein encoded by this gene is a member of the PP2C family of Ser/Thr protein phosphatases. PP2C family members are known to be negative regulators of cell stress response pathways. The expression of this gene is induced in a p53-dependent manner in response to various environmental stresses. While being induced by tumor suppressor protein TP53/p53, this phosphatase negatively regulates the activity of p38 MAP kinase, MAPK/p38, through which it reduces the phosphorylation of p53, and in turn suppresses p53-mediated transcription and apoptosis. This phosphatase thus mediates a feedback regulation of p38-p53 signaling that contributes to growth inhibition and the suppression of stress induced apoptosis. This gene is located in a chromosomal region known to be amplified in breast cancer. The amplification of this gene has been detected in both breast cancer cell line and primary breast tumors, which suggests a role of this gene in cancer development.

References

Zhang, X., et al. Cancer Res. 70(18):7176-7186(2010)
Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010) :
Moon, S.H., et al. J. Biol. Chem. 285(17):12935-12947(2010)
Macurek, L., et al. Oncogene 29(15):2281-2291(2010)
Yang, D.H., et al. Zhonghua Yi Xue Za Zhi 90(8):519-522(2010)

Images



All lanes: Anti-PPM1D Antibody (CenteA) at 1:1000 dilution Lane 1: MCF-7 whole cell lysate Lane 2: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ASP1615) at 1/15000 dilution. Observed band size: 67 KDa Blocking/Dilution buffer: 5% NFDM/TBST.

Citations

- Protein phosphatase 2Cδ/Wip1 regulates phospho-p90RSK2 activity in lesional psoriatic skin.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.