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PPM1D Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8437b

Specification

PPM1D Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O15297

PPM1D Antibody (C-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP8437b was selected from the C-term region of human PPM1D. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PPM1D Antibody (C-term) Blocking Peptide - Protein Information

PPM1D Antibody (C-term) Blocking Peptide - Background

PPM1D 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. Expression of this PPM1D 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 negativelyregulates 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 stressinduced apoptosis. The PPM1D 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.

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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.

PPM1D Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides