

Datasheet for ABIN6987856
anti-PPM1D antibody (HRP)



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Overview

Quantity:	100 µL
Target:	PPM1D
Reactivity:	Human, Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This PPM1D antibody is conjugated to HRP
Application:	Immunohistochemistry (Paraffin-embedded Sections) (IHC (p))

Product Details

Immunogen:	KLH conjugated synthetic peptide derived from human PPM1D:471-570/605
Isotype:	IgG
Cross-Reactivity:	Human, Mouse, Rat
Purification:	Purified by Protein A.

Target Details

Target:	PPM1D
Alternative Name:	PPM1D (PPM1D Products)
Background:	Synonyms: WPP-DOMAIN INTERACTING PROTEIN 1, EC 3.1.3.16, p53 induced protein phosphatase 1, PP2C delta, PP2CD, protein phosphatase 1D magnesium-dependent delta isoform, Protein phosphatase 2C delta isoform, Protein phosphatase 2C isoform delta, Protein phosphatase magnesium dependent 1 delta, WIP 1, WIP1, AV338790, PPM1D_HUMAN.

Target Details

Background: PPM1D (Wip) is a serine/threonine phosphatase implicated in cell cycle control, spermatogenesis, and lymphoid cell function. The predicted 605-amino acid PPM1D protein contains 2 putative nuclear localization signals and 3 regions conserved in serine/threonine PP2C phosphatases, as well as characteristics of a type 2C phosphatase, including magnesium dependence and relative insensitivity to okadaic acid. PPM1D expression is induced in response to ionizing radiation in a p53-dependent manner. The accumulation of PPM1D mRNA following ionizing radiation is rapid and transient, and PPM1D protein is localized to the nucleus. PPM1D may contribute to growth inhibitory pathways activated in response to DNA damage in a p53-dependent manner. PPM1D inhibits phosphorylation of the p38 mitogen-activated (MAP)kinase protein. Through p38 MAPK, PPM1D modulates the CDKN2A tumor-suppressor locus. This gene is located in a chromosomal region known to be amplified in breast cancer, (located at 17q22-q23), is amplified in human breast tumor cell lines and in approximately 11 % of primary breast tumors, and appears to lead to cell transformation by abrogating p53 tumor suppressor activity. Inactivation of the p38 MAPK through PPM1D overexpression resulting from PPM1D amplification may contribute to the development of human cancers by suppressing p53 activation. PPM1D null mice have increased susceptibility to pathogens and reduced male fertility and longevity. Function : 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. Subunit : Interacts with CHEK1 and CHEK2, dephosphorylates them. Similarity : Belongs to the PP2C family. Contains 1 PP2C-like domain.

Gene ID:	8493
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UniProt:	O15297
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Pathways:	p53 Signaling , Cell Division Cycle
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Application Details

Application Notes:	IHC-P 1:200-400
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Restrictions:	For Research Use only
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Handling

Format:	Liquid
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Concentration:	1 µg/µL
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Buffer:	Aqueous buffered solution containing 0.01M TBS (pH 7.4) with 1 % BSA, 0.03 % Proclin300 and
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Handling

50 % Glycerol.

Preservative: ProClin

Precaution of Use: This product contains ProClin: a POISONOUS AND HAZARDOUS SUBSTANCE, which should be handled by trained staff only.

Storage: -20 °C

Storage Comment: Store at -20°C. Aliquot into multiple vials to avoid repeated freeze-thaw cycles.

Expiry Date: 12 months