

PP5 Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52705

Specification

PP5 Antibody - Product Information

Application	WB
Primary Accession	P53041
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Calculated MW	57 KDa

PP5 Antibody - Additional Information

Gene ID 5536

Other Names

FLJ36922;FLJ55954;OTTHUMP00000165834;PP-T;PP5;PPP5;PPP5_HUMAN;PPP5C;PPT;Protein phosphatase 5, catalytic subunit;Protein phosphatase T;Serine/threonine protein phosphatase 5;Serine/threonine-protein phosphatase 5.

Dilution

WB~~1:1000

Format

Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide, pH 7.3.

Storage

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

PP5 Antibody - Protein Information

Name PPP5C

Synonyms PPP5

Function

Serine/threonine-protein phosphatase that dephosphorylates a myriad of proteins involved in different signaling pathways including the kinases CSNK1E, ASK1/MAP3K5, PRKDC and RAF1, the nuclear receptors NR3C1, PPARG, ESR1 and ESR2, SMAD proteins and TAU/MAPT (PubMed:14734805, PubMed:14764652, PubMed:14871926, PubMed:15383005, PubMed:15546861, PubMed:16260606, PubMed:<a

[16790549](http://www.uniprot.org/citations/16790549), PubMed: [16892053](http://www.uniprot.org/citations/16892053), PubMed: [19176521](http://www.uniprot.org/citations/19176521), PubMed: [19948726](http://www.uniprot.org/citations/19948726), PubMed: [21144835](http://www.uniprot.org/citations/21144835), PubMed: [22399290](http://www.uniprot.org/citations/22399290), PubMed: [22781750](http://www.uniprot.org/citations/22781750), PubMed: [23102700](http://www.uniprot.org/citations/23102700), PubMed: [30699359](http://www.uniprot.org/citations/30699359), PubMed: [9000529](http://www.uniprot.org/citations/9000529)). Implicated in wide ranging cellular processes, including apoptosis, differentiation, DNA damage response, cell survival, regulation of ion channels or circadian rhythms, in response to steroid and thyroid hormones, calcium, fatty acids, TGF-beta as well as oxidative and genotoxic stresses (PubMed: [14734805](http://www.uniprot.org/citations/14734805), PubMed: [14764652](http://www.uniprot.org/citations/14764652), PubMed: [14871926](http://www.uniprot.org/citations/14871926), PubMed: [15383005](http://www.uniprot.org/citations/15383005), PubMed: [15546861](http://www.uniprot.org/citations/15546861), PubMed: [16260606](http://www.uniprot.org/citations/16260606), PubMed: [16790549](http://www.uniprot.org/citations/16790549), PubMed: [16892053](http://www.uniprot.org/citations/16892053), PubMed: [19176521](http://www.uniprot.org/citations/19176521), PubMed: [19948726](http://www.uniprot.org/citations/19948726), PubMed: [21144835](http://www.uniprot.org/citations/21144835), PubMed: [22399290](http://www.uniprot.org/citations/22399290), PubMed: [22781750](http://www.uniprot.org/citations/22781750), PubMed: [23102700](http://www.uniprot.org/citations/23102700), PubMed: [30699359](http://www.uniprot.org/citations/30699359), PubMed: [9000529](http://www.uniprot.org/citations/9000529)). Participates in the control of DNA damage response mechanisms such as checkpoint activation and DNA damage repair through, for instance, the regulation ATM/ATR-signaling and dephosphorylation of PRKDC and TP53BP1 (PubMed: [14871926](http://www.uniprot.org/citations/14871926), PubMed: [16260606](http://www.uniprot.org/citations/16260606), PubMed: [21144835](http://www.uniprot.org/citations/21144835)). Inhibits ASK1/MAP3K5-mediated apoptosis induced by oxidative stress (PubMed: [23102700](http://www.uniprot.org/citations/23102700)). Plays a positive role in adipogenesis, mainly through the dephosphorylation and activation of PPARG transactivation function (By similarity). Also dephosphorylates and inhibits the anti- adipogenic effect of NR3C1 (By similarity). Regulates the circadian rhythms, through the dephosphorylation and activation of CSNK1E (PubMed: [16790549](http://www.uniprot.org/citations/16790549)). May modulate TGF-beta signaling pathway by the regulation of SMAD3 phosphorylation and protein expression levels (PubMed: [22781750](http://www.uniprot.org/citations/22781750)). Dephosphorylates and may play a role in the regulation of TAU/MAPT (PubMed: [15546861](http://www.uniprot.org/citations/15546861)). Through their dephosphorylation, may play a role in the regulation of ion channels such as KCNH2 (By similarity). Dephosphorylate FNIP1, disrupting interaction with HSP90AA1/Hsp90 (PubMed: [30699359](http://www.uniprot.org/citations/30699359)).

Cellular Location

Nucleus. Cytoplasm. Cell membrane. Note=Predominantly nuclear (PubMed:15383005). But also present in the cytoplasm (PubMed:15383005) Translocates from the cytoplasm to the plasma membrane in a RAC1- dependent manner (PubMed:19948726).

Tissue Location

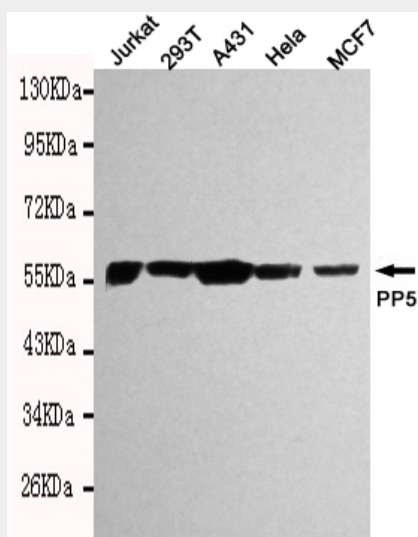
Ubiquitous..

PP5 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

PP5 Antibody - Images



Western blot detection of PP5 in HeLa, Jurkat, 293T, A431 and MCF7 cell lysates using PP5 mouse mAb (1:1000 diluted). Predicted band size: 57kDa. Observed band size: 57kDa.

PP5 Antibody - Background

Serine/threonine-protein phosphatase that dephosphorylates a myriad of proteins involved in different signaling pathways including the kinases CSNK1E, ASK1/MAP3K5, PRKDC and RAF1, the nuclear receptors NR3C1, PPARG, ESR1 and ESR2, SMAD proteins and TAU/MAPT. Implicated in wide ranging cellular processes, including apoptosis, differentiation, DNA damage response, cell survival, regulation of ion channels or circadian rhythms, in response to steroid and thyroid hormones, calcium, fatty acids, TGF-beta as well as oxidative and genotoxic stresses. Participates in the control of DNA damage response mechanisms such as checkpoint activation and DNA damage repair through, for instance, the regulation ATM/ATR-signaling and dephosphorylation of PRKDC and TP53BP1. Inhibits ASK1/MAP3K5-mediated apoptosis induced by oxidative stress. Plays a positive role in adipogenesis, mainly through the dephosphorylation and activation of PPARG transactivation function. Also dephosphorylates and inhibits the anti-adipogenic effect of NR3C1. Regulates the circadian rhythms, through the dephosphorylation and activation of CSNK1E. May modulate TGF-beta signaling pathway by the regulation of SMAD3 phosphorylation and protein expression levels. Dephosphorylates and may play a role in the regulation of TAU/MAPT. Through their dephosphorylation, may play a role in the regulation of ion channels such as KCNH2.

PP5 Antibody - References

Kalnine N.,et al.Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
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Chen M.X.,et al.EMBO J. 13:4278-4290(1994).
Yong W.H.,et al.Genomics 29:533-536(1995).
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