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WWP1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP58505

Product Information

Application	IHC-P, IHC-F, IF, E
Primary Accession	Q9H0M0
Reactivity	Rat, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	105202
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human WWP1
Epitope Specificity	21-120/922
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cytoplasm. Cell membrane; Peripheral membrane protein. Nucleus.
SIMILARITY	Contains 1 C2 domain.Contains 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain. Contains 4 WW domains.
SUBUNIT	Binds KLF2 AND HIVEP3. Binds SCNN1A, SCNN1B, SCNN1G, WBP1, WBP2, DRPLA and adenovirus type 2 PIII. Interacts with RNF11. Interacts with SPG20. Interacts with ERBB4 isoforms JM-B CYT-1 and JM-A CYT-1. Interacts with SMAD1, SMAD2, SMAD3, SMAD5, SMAD6, SMAD7, TGFBR1 AND TGFBR2. Associates with the TGFBR1:TGFBR2 receptor complex in presence of SMAD7. Interacts with SKIL isoform 1. Interacts with TP63 isoform 1 and isoform 2. Interacts with STAMBP and RNF11. Interacts with NDFIP1 and NDFIP2 (Probable); this interaction activates the E3 ubiquitin-protein ligase. Interacts with TGIF.
Post-translational modifications	Auto-ubiquitinated and ubiquitinated by RNF11.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	WWP1 is an E3 ubiquitin ligase and belongs to a family of NEDD4-like proteins. WWP1 contains 4 tandem WW domains and a HECT (homologous to the E6-associated protein carboxyl terminus) domain. WW domain-containing proteins are found in all eukaryotes and play an important role in the regulation of a wide variety of cellular functions such as protein degradation, transcription, and RNA splicing. The HECT domain of WWP1 has been implicated in regulating the localization and stability of p53 – inhibition of WWP1 results in a decrease in p53 expression, whilst WWP1 mediated stabilization of p53 appears to be associated with an accumulation of cytoplasmic p53. WWP1 also negatively regulates the TGF beta tumor suppressor pathway by inactivating its molecular components (SMAD2, SMAD4 and TGFbetaR1). WWP1 has been implicated in both breast and prostate cancers.

Additional Information

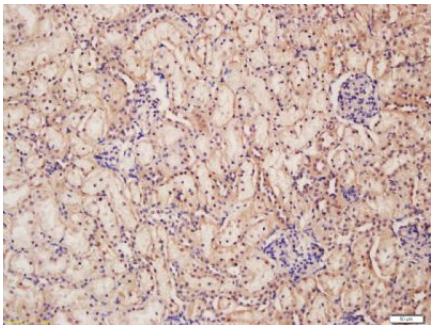
Gene ID	11059
Other Names	NEDD4-like E3 ubiquitin-protein ligase WWP1, 2.3.2.26, Atrophin-1-interacting protein 5, AIP5, HECT-type E3 ubiquitin transferase WWP1, TGIF-interacting ubiquitin ligase 1, Tiul1, WW domain-containing protein 1, WWP1
Target/Specificity	Detected in heart, placenta, pancreas, kidney, liver, skeletal muscle, bone marrow, fetal brain, and at much lower levels in adult brain and lung. Isoform 1 and isoform 5 predominate in all tissues tested, except in testis and bone marrow, where isoform 5 is expressed at much higher levels than isoform 1.
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	WWP1
Function	E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates. Ubiquitinates ERBB4 isoforms JM-A CYT-1 and JM-B CYT-1, KLF2, KLF5 and TP63 and promotes their proteasomal degradation. Ubiquitinates RNF11 without targeting it for degradation. Ubiquitinates and promotes degradation of TGFBR1; the ubiquitination is enhanced by SMAD7. Ubiquitinates SMAD6 and SMAD7. Ubiquitinates and promotes degradation of SMAD2 in response to TGF-beta signaling, which requires interaction with TGIF. Activates the Hippo signaling pathway in response to cell contact inhibition and recruitment to the Crumbs complex at the cell membrane (PubMed:34404733). Monoubiquitinates AMOTL2 which facilitates its interaction with and activation of LATS2 (PubMed:34404733). LATS2 then phosphorylates YAP1, excluding it from the nucleus and therefore ultimately represses YAP1-driven transcription of target genes (PubMed:34404733).
Cellular Location	Cytoplasm. Cell membrane; Peripheral membrane protein {ECO:0000250|UniProtKB:Q8BZZ3}. Nucleus {ECO:0000250|UniProtKB:Q8BZZ3} Cell junction. Note=Translocates to the plasma membrane in response to increased cell-cell contact inhibition and subsequent interaction with the Crumbs complex
Tissue Location	Detected in heart, placenta, pancreas, kidney, liver, skeletal muscle, bone marrow, fetal brain, and at much lower levels in adult brain and lung. Isoform 1 and isoform 5 predominate in all tissues tested, except in testis and bone marrow, where isoform 5 is expressed at much higher levels than isoform 1

Images

Tissue/cell: rat kidney tissue; 4% Paraformaldehyde-fixed



and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;
Incubation: Anti-WWP1 Polyclonal Antibody, Unconjugated(AP58505) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining