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BAP1 Rabbit mAb

Catalog # AP76400

Product Information

Application	WB, IHC-P, FC
Primary Accession	Q92560
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	80362

Additional Information

Gene ID	8314
Other Names	BAP1
Dilution	WB~~1:500-1:1000 IHC-P~~N/A FC~~1:50-1:100
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

Name	BAP1 {ECO:0000303|PubMed:9528852, ECO:0000312|HGNC:HGNC:950}
Function	Deubiquitinating enzyme that plays a key role in chromatin by mediating deubiquitination of histone H2A and HCFC1 (PubMed:12485996, PubMed:18757409, PubMed:20436459, PubMed:25451922, PubMed:35051358). Catalytic component of the polycomb repressive deubiquitinase (PR-DUB) complex, a complex that specifically mediates deubiquitination of histone H2A monoubiquitinated at 'Lys-120' (H2AK119ub1) (PubMed:20436459, PubMed:25451922, PubMed:30664650, PubMed:35051358). Does not deubiquitinate monoubiquitinated histone H2B (PubMed:20436459, PubMed:30664650). The PR-DUB complex is an epigenetic regulator of gene expression and acts as a transcriptional coactivator, affecting genes involved in development, cell communication, signaling, cell proliferation and cell viability (PubMed:20805357, PubMed:30664650, PubMed:36180891). Antagonizes PRC1 mediated H2AK119ub1 monoubiquitination (PubMed:30664650). As part of the PR-DUB complex, associates with chromatin enriched in histone marks H3K4me1,

H3K4me3, and H3K27Ac, but not in H3K27me3 (PubMed:36180891). Recruited to specific gene-regulatory regions by YY1 (PubMed:20805357). Acts as a regulator of cell growth by mediating deubiquitination of HCFC1 N- terminal and C-terminal chains, with some specificity toward 'Lys-48'- linked polyubiquitin chains compared to 'Lys-63'-linked polyubiquitin chains (PubMed:19188440, PubMed:19815555). Deubiquitination of HCFC1 does not lead to increase stability of HCFC1 (PubMed:19188440, PubMed:19815555). Interferes with the BRCA1 and BARD1 heterodimer activity by inhibiting their ability to mediate ubiquitination and autoubiquitination (PubMed:19117993). It however does not mediate deubiquitination of BRCA1 and BARD1 (PubMed:19117993). Able to mediate autodeubiquitination via intramolecular interactions to counteract monoubiquitination at the nuclear localization signal (NLS), thereby protecting it from cytoplasmic sequestration (PubMed:24703950). Negatively regulates epithelial-mesenchymal transition (EMT) of trophoblast stem cells during placental development by regulating genes involved in epithelial cell integrity, cell adhesion and cytoskeletal organization (PubMed:34170818).

Cellular Location

Cytoplasm. Nucleus. Chromosome. Note=Mainly nuclear (PubMed:24703950, PubMed:30664650). Binds to chromatin (PubMed:30664650). Localizes to the cytoplasm when monoubiquitinated by the E2/E3 hybrid ubiquitin- protein ligase UBE2O (PubMed:24703950). Recruitment to chromatin is dependent on ASXL1/2/3 and recruitment to specific genes on FOXK1/2 (By similarity). Nuclear localization is redundantly mediated by the importin and transportin systems; TNPO1/transportin-1 is the major mediator of nuclear localization (PubMed:35446349) {ECO:0000250|UniProtKB:Q99PU7, ECO:0000269|PubMed:24703950, ECO:0000269|PubMed:30664650, ECO:0000269|PubMed:35446349}

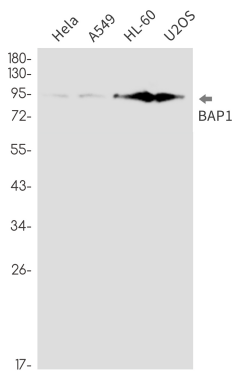
Tissue Location

Highly expressed in testis, placenta and ovary (PubMed:9528852). Expressed in breast (PubMed:9528852). levels in the placenta increase over the course of pregnancy (PubMed:34170818)

Background

This gene belongs to the ubiquitin C-terminal hydrolase subfamily of deubiquitinating enzymes that are involved in the removal of ubiquitin from proteins. The encoded enzyme binds to the breast cancer type 1 susceptibility protein (BRCA1) via the RING finger domain of the latter and acts as a tumor suppressor. In addition, the enzyme may be involved in regulation of transcription, regulation of cell cycle and growth, response to DNA damage and chromatin dynamics. Germline mutations in this gene may be associated with tumor predisposition syndrome (TPDS), which involves increased risk of cancers including malignant mesothelioma, uveal melanoma and cutaneous melanoma. [provided by RefSeq, May 2013]

Images



Western blot analysis of BAP1 in Hela, A549, HL-60, U2OS lysates using BAP1 antibody.