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PHAP I Antibody

Catalog # ASC10195

Product Information

Application	WB, IF, ICC, E
Primary Accession	P39687
Other Accession	P39687, 730318
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	28585
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	PHAP I antibody can be used for detection of PHAP I by Western blot at 1 - 2 g/mL. A band at approximately 32 kDa can be detected. Antibody can also be used for immunocytochemistry starting at 2 g/mL. For immunofluorescence start at 10 g/mL.

Additional Information

Gene ID	8125
Other Names	PHAP I Antibody: LANP, MAPM, PP32, HPPCn, PHAP1, PHAPI, I1PP2A, C15orf1, LANP, Acidic leucine-rich nuclear phosphoprotein 32 family member A, Acidic nuclear phosphoprotein pp32, acidic (leucine-rich) nuclear phosphoprotein 32 family, member A
Target/Specificity	ANP32A; This polyclonal antibody has no cross-reaction to PHAP I2a and PHAP III.
Reconstitution & Storage	PHAP I antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	PHAP I Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANP32A
Synonyms	C15orf1, LANP, MAPM, PHAP1
Function	Multifunctional protein that is involved in the regulation of many processes including tumor suppression, apoptosis, cell cycle progression or transcription (PubMed:10400610, PubMed:11360199, PubMed:16341127,

	PubMed:18439902). Promotes apoptosis by favouring the activation of caspase-9/CASP9 and allowing apoptosome formation (PubMed:18439902). In addition, plays a role in the modulation of histone acetylation and transcription as part of the INHAT (inhibitor of histone acetyltransferases) complex. Inhibits the histone- acetyltranferase activity of EP300/CREBBP (CREB-binding protein) and EP300/CREBBP-associated factor by histone masking (PubMed:11830591). Preferentially binds to unmodified histone H3 and sterically inhibiting its acetylation and phosphorylation leading to cell growth inhibition (PubMed:16341127). Participates in other biochemical processes such as regulation of mRNA nuclear-to-cytoplasmic translocation and stability by its association with ELAVL1 (Hu-antigen R) (PubMed:18180367). Plays a role in E4F1-mediated transcriptional repression as well as inhibition of protein phosphatase 2A (PubMed:15642345, PubMed:17557114).
Cellular Location	Nucleus. Cytoplasm Endoplasmic reticulum. Note=Translocates to the cytoplasm during the process of neuritogenesis (By similarity). Shuttles between nucleus and cytoplasm. {ECO:0000250, ECO:0000269|PubMed:18180367}
Tissue Location	Expressed in all tissues tested. Highly expressed in kidney and skeletal muscle, moderate levels of expression in brain, placenta and pancreas, and weakly expressed in lung. Found in all regions of the brain examined (amygdala, caudate nucleus, corpus callosum, hippocampus and thalamus), with highest levels in amygdala

Background

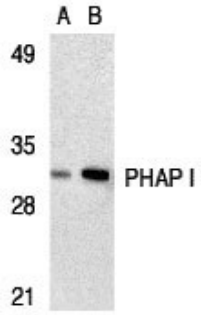
PHAP I Antibody: Apoptosis is related to many diseases and development. Caspase-9 plays a central role in cell death induced by a variety of apoptosis activators. Cytochrome c, after released from mitochondria, binds to Apaf-1, which forms an apoptosome that in turn binds to and activate procaspase-9. Activated caspase-9 cleaves and activates the effector caspases (caspase-3, -6 and -7), which are responsible for the proteolytic cleavage of many key proteins in apoptosis. The tumor suppressor putative HLA-DR-associated proteins (PHAPs) were recently identified as important regulators of mitochondrion apoptosis. PHAP appears to facilitate apoptosome-medicated caspase-9 activation and to stimulate the mitochondrial apoptotic pathway. PHAP was also shown to oppose both Ras- and Myc-medicated cell transformation.

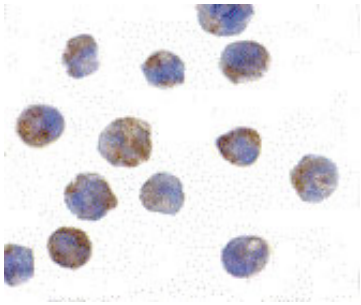
References

Jiang X, Kim HE, Shu H, Zhao Y, Zhang H, Kofron J, Donnelly J, Burns D, Ng SC , Rosenberg S, Wang X. Distinctive roles of PHAP proteins and prothymosin-α in a death regulatory pathway. Science. 2003;299(5604):223-6.
Nicholson DW, Thornberry NA. Apoptosis. Life and death decisions. Science. 2003 10;299(5604):214-5.

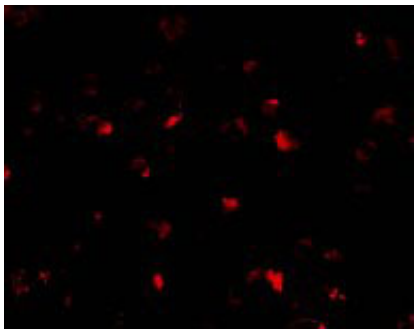
Images

Western blot analysis of PHAP I expression in human Raji cell lysate with PHAP antibody I at 2 µg/mL (lane A) and 4 µg/mL (lane B), respectively.





Immunocytochemistry of PHAP I in Raji cells with PHAP I antibody at 2 µg/mL.



Immunofluorescence of PHAP I in Raji cells with PHAP I antibody at 10 µg/mL.