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# PHAP I Antibody

Catalog # ASC10198

## Product Information

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| **Application** | WB, IF, E, IHC-P |
| **Primary Accession** | P39687 |
| **Other Accession** | P39687, 730318 |
| **Reactivity** | Human, Mouse, Rat |
| **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 μg/mL. A band at approximately 32 kDa can be detected. Antibody can also be used for immunohistochemistry starting at 2 μg/mL. For immunofluorescence start at 2 μg/mL. |

## Additional Information

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| **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

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| **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, |

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| | 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- acetyltransferase 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

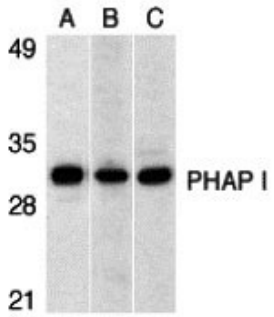
PHAP I Antibody: Apoptosis is related to many diseases and development. Caspase-9 plays a central role in cell death induced by a variety of apoptosis activators. Cytochrome c, after released from mitochondria, binds to Apaf-1, which forms an apoptosome that in turn binds to and activate procaspase-9. 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.

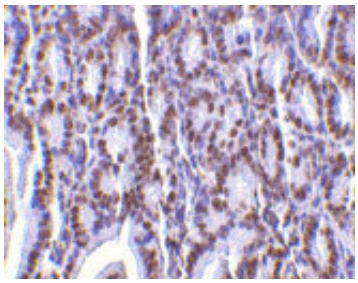
## References

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.

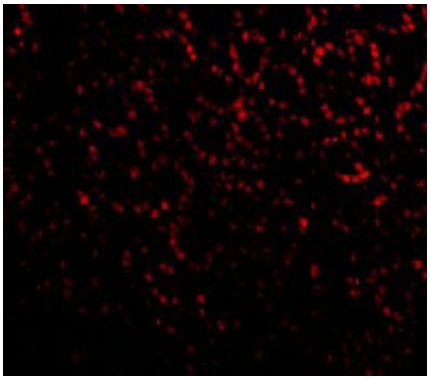
## Images

Western blot analysis of PHAP I expression in human Raji cell (A), mouse (B) and rat (C) testis tissue llysates with PHAP I antibody at 1 µg/mL.



Immunohistochemistry of PHAP I in mouse small intestine tissue with PHAP I antibody at 2 µg/mL.



Immunofluorescence of PHAP I in Mouse Small Intestine cells with PHAP I antibody at 20 µg/mL.

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