

APIP (h): 293 Lysate: sc-111191

BACKGROUND

APIP (Apaf-1-interacting protein), also known as APIP2, is a member of the aldolase class II family and has a highly conserved C-terminal from *C. elegans* to humans. It is ubiquitously expressed, with high expression levels in heart, kidney and skeletal muscle. Alternative splicing produces two isoforms of APIP. Isoform 1 is the full length, 242 amino acid protein; isoform 2 is missing residues 1-38 and contains a distinct sequence for amino acids 39-53. APIP plays an important role in preventing muscle ischemic damage. It suppresses hypoxia-induced cell death by inducing the activation of Akt and ERK 1/2, which are responsible for inhibition of caspase-9 via phosphorylation, and competing with caspase-9 to bind the caspase recruitment domain (CARD) of Apaf-1. Through these mechanisms, APIP negatively regulates the activation of caspase-9 and Apaf-1-mediated cell death.

REFERENCES

1. Lai, C.H., et al. 2000. Identification of novel human genes evolutionarily conserved in *Caenorhabditis elegans* by comparative proteomics. *Genome Res.* 10: 703-713.
2. Cao, G., et al. 2004. Cloning of a novel Apaf-1-interacting protein: a potent suppressor of apoptosis and ischemic neuronal cell death. *J. Neurosci.* 24: 6189-6201.
3. Cho, D.H., et al. 2004. Induced inhibition of ischemic/hypoxic injury by APIP, a novel Apaf-1-interacting protein. *J. Biol. Chem.* 279: 39942-39950.
4. Anichini, A., et al. 2006. Apaf-1 signaling in human melanoma. *Cancer Lett.* 238: 168-179.
5. Schafer, Z.T. and Kornbluth, S. 2006. The apoptosome: physiological, developmental, and pathological modes of regulation. *Dev. Cell* 10: 549-561.
6. Cho, D.H., et al. 2007. Suppression of hypoxic cell death by APIP-induced sustained activation of AKT and ERK 1/2. *Oncogene* 26: 2809-2814.
7. LocusLink Report (LocusID: 51074). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: APIP (human) mapping to 11p13.

PRODUCT

APIP (h): 293 Lysate represents a lysate of human APIP transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

APIP (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive APIP antibodies. Recommended use: 10-20 µl per lane.

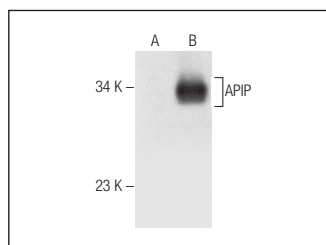
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

APIP (C-9): sc-376666 is recommended as a positive control antibody for Western Blot analysis of enhanced human APIP expression in APIP trans-fected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



APIP (C-9): sc-376666. Western blot analysis of APIP expression in non-transfected: sc-110760 (A) and human APIP transfected: sc-111191 (B) 293 whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.