SANTA CRUZ BIOTECHNOLOGY, INC.

APIP (D-8): sc-390721

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 ERK1/2. 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.

SOURCE

APIP (D-8) is a mouse monoclonal antibody raised against amino acids 171-242 mapping at the C-terminus of APIP of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APIP (D-8) is available conjugated to agarose (sc-390721 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390721 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390721 PE), fluorescein (sc-390721 FITC), Alexa Fluor® 488 (sc-390721 AF488), Alexa Fluor® 546 (sc-390721 AF546), Alexa Fluor® 594 (sc-390721 AF594) or Alexa Fluor® 647 (sc-390721 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390721 AF680) or Alexa Fluor® 790 (sc-390721 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

APIP (D-8) is recommended for detection of APIP of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for APIP siRNA (h): sc-61976, APIP shRNA Plasmid (h): sc-61976-SH and APIP shRNA (h) Lentiviral Particles: sc-61976-V.

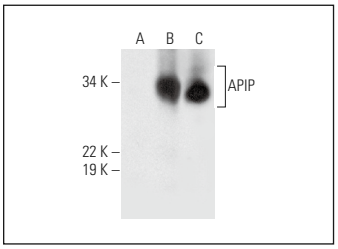
Molecular Weight of APIP: 27 kDa.

Positive Controls: APIP (h): 293 Lysate: sc-111191, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

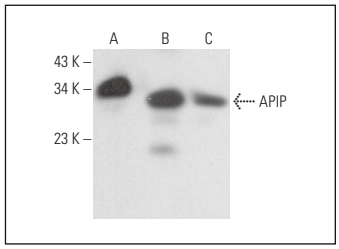
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



APIP (D-8): sc-390721. Western blot analysis of APIP expression in non-transfected 293: sc-110760 (**A**), human APIP transfected 293: sc-111191 (**B**) and HeLa (**C**) whole cell lysates.



APIP (D-8): sc-390721. Western blot analysis of APIP expression in HeLa (**A**), K-562 (**B**) and A549 (**C**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. 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.