

APEH (B-2): sc-393452

BACKGROUND

APEH (acyl-peptide hydrolase), also known as APH, OPH or ACPH, is a 732 amino acid cytoplasmic protein that exists as a homotetramer and functions to catalyze the hydrolysis of N-terminal acetylated amino acids from small acetylated peptides. Once hydrolyzed from the target peptide, the acetyl amino acid is further processed by an aminoacylase to produce acetate and a free amino acid. The gene encoding human APEH maps to a region on chromosome 3 that is deleted in various types of cancers, including renal cell carcinoma and small cell lung carcinoma, suggesting that APEH may be involved in tumor transformation events. Chromosome 3 is made up of about 214 million bases encoding over 1,100 genes, including a chemokine receptor (CKR) gene cluster and a variety of human cancer-related gene loci. Key tumor suppressing genes on chromosome 3 include those that encode the apoptosis mediator RASSF1, the cell migration regulator HYAL1 and the angiogenesis suppressor SEMA3B.

REFERENCES

- Naylor, S.L., et al. 1989. The DNF15S2 locus at 3p21 is transcribed in normal lung and small cell lung cancer. *Genomics* 4: 355-361.
- Erlandsson, R., et al. 1990. A gene near the D3F15S2 site on 3p is expressed in normal human kidney but not or only at a severely reduced level in 11 of 15 primary renal cell carcinomas (RCC). *Oncogene* 5: 1207-1211.
- Scaloni, A., et al. 1992. Acylpeptide hydrolase: inhibitors and some active site residues of the human enzyme. *J. Biol. Chem.* 267: 3811-3818.
- Kohno, T., et al. 1993. Deletion mapping of chromosome 3p in human uterine cervical cancer. *Oncogene* 8: 1825-1832.
- Mitta, M., et al. 1996. The nucleotide sequence of human acylamino acid-releasing enzyme. *DNA Res.* 3: 31-35.
- Scaloni, A., et al. 1999. Structural investigations on human erythrocyte acylpeptide hydrolase by mass spectrometric procedures. *J. Protein Chem.* 18: 349-360.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 102645. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: APEH (human) mapping to 3p21.31; Apeh (mouse) mapping to 9 F2.

SOURCE

APEH (B-2) is a mouse monoclonal antibody raised against amino acids 16-101 mapping near the N-terminus of APEH of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

APEH (B-2) is recommended for detection of APEH of mouse, rat and 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 APEH siRNA (h): sc-78303, APEH siRNA (m): sc-141149, APEH shRNA Plasmid (h): sc-78303-SH, APEH shRNA Plasmid (m): sc-141149-SH, APEH shRNA (h) Lentiviral Particles: sc-78303-V and APEH shRNA (m) Lentiviral Particles: sc-141149-V.

Molecular Weight (predicted) of APEH: 81 kDa.

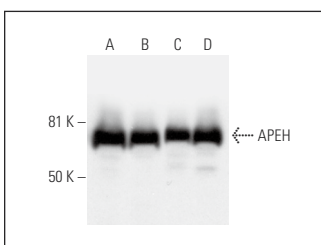
Molecular Weight (observed) of APEH: 84-90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or human heart extract: sc-363763.

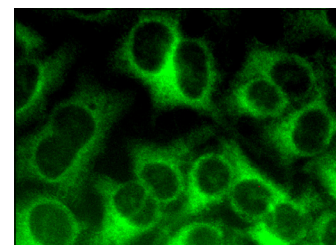
RECOMMENDED SUPPORT REAGENTS

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



APEH (B-2): sc-393452. Western blot analysis of APEH expression in Jurkat (A) and HeLa (B) whole cell lysates and human heart (C) and human liver (D) tissue extracts.



APEH (B-2): sc-393452. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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