

# APEH (G-6): sc-376612

## 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

1. 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.
2. 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.
3. Scaloni, A., et al. 1992. Acylpeptide hydrolase: inhibitors and some active site residues of the human enzyme. *J. Biol. Chem.* 267: 3811-3818.
4. Kohno, T., et al. 1993. Deletion mapping of chromosome 3p in human uterine cervical cancer. *Oncogene* 8: 1825-1832.
5. Mitta, M., et al. 1996. The nucleotide sequence of human acylamino acid-releasing enzyme. *DNA Res.* 3: 31-35.
6. Scaloni, A., et al. 1999. Structural investigations on human erythrocyte acylpeptide hydrolase by mass spectrometric procedures. *J. Protein Chem.* 18: 349-360.

## CHROMOSOMAL LOCATION

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

## SOURCE

APEH (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 23-59 near the N-terminus of APEH of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-376612 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## RESEARCH USE

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

## APPLICATIONS

APEH (G-6) 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.

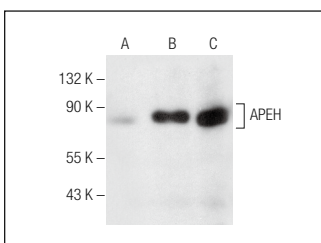
Molecular Weight (observed) of APEH: 84-90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat whole cell lysate: sc-2204 or APEH (m): 293T Lysate: sc-118467.

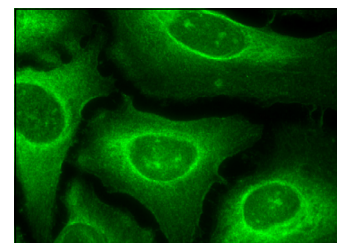
## RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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 (G-6): sc-376612. Western blot analysis of APEH expression in non-transfected 293T: sc-117752 (A), mouse APEH transfected 293T: sc-118467 (B) and HeLa (C) whole cell lysates.



APEH (G-6): sc-376612. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Tangri, A., et al. 2021. Deubiquitinase UCHL1 maintains protein homeostasis through the PSMA7-APEH-proteasome axis in high-grade serous ovarian carcinoma. *Mol. Cancer Res.* 19: 1168-1181.

## STORAGE

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