SANTA CRUZ BIOTECHNOLOGY, INC.

APHC (N-15): sc-241828

BACKGROUND

APHC (alkaline phytoceramidase), also known as ACER3 (alkaline ceramidase 3), PHCA (phytoceramidase, alkaline) or alkaline dihydroceramidase SB89, is a 267 amino acid multi-pass membrane protein that belongs to the alkaline ceramidase family and exists as 2 alternatively spliced isoforms. Encoded by a gene that maps to human chromosome 11q13.5, APHC is ubiquitously expressed, with highest expression in placenta, and localizes to endoplasmic reticulum and Golgi apparatus membranes. Activated by Ca^{2+} and inhibited by Zn^{2+}, APHC is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, *Saccharomyces cerevisiae, Kluyveromyces lactis, Magnaporthe grisea, Neurospora crassa, Arabidopsis thaliana* and rice. APHC hydrolyzes phytoceramide into phytosphingosine and free fatty acid, but does not exhibit reverse activity. APHC also participates in hydrolase activity, acting on carbon-nitrogen bonds, but not peptide bonds, in linear amides.

REFERENCES

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4. Mao, C., et al. 2008. Ceramidases: regulators of cellular responses mediated by ceramide, sphingosine, and sphingosine-1-phosphate. Biochim. Biophys. Acta 1781: 424-434.
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7. Ekiz, H.A., et al. 2010. Therapeutic applications of bioactive sphingolipids in hematological malignancies. Int. J. Cancer 127: 1497-1506.
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9. Mao, Z., et al. 2010. Alkaline ceramidase 2 (ACER2) and its product dihydrosphingosine mediate the cytotoxicity of N-(4-hydroxyphenyl)retinamide in tumor cells. J. Biol. Chem. 285: 29078-29090.

CHROMOSOMAL LOCATION

Genetic locus: ACER3 (human) mapping to 11q13.5; Acer3 (mouse) mapping to 7 E2.

SOURCE

APHC (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of APHC of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-241828 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

APHC (N-15) is recommended for detection of APHC of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

APHC (N-15) is also recommended for detection of APHC in additional species, including canine, bovine and avian.

Suitable for use as control antibody for APHC siRNA (h): sc-96956, APHC siRNA (m): sc-141152, APHC shRNA Plasmid (h): sc-96956-SH, APHC shRNA Plasmid (m): sc-141152-SH, APHC shRNA (h) Lentiviral Particles: sc-96956-V and APHC shRNA (m) Lentiviral Particles: sc-141152-V.

Molecular Weight of APHC: 32 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.