SANTA CRUZ BIOTECHNOLOGY, INC.

ASPH (H-300): sc-66939

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Aspartyl/asparaginyl β-hydroxylase (ASPH) is a widely-expressed type II membrane protein involved in calcium homeostasis. Located in the endoplasmic reticulum, ASPH specifically hydroxylates an Asp or Asn residue in the epidermal growth factor-like (EGF) domains of several proteins, using iron as a cofactor. The ASPH gene encodes 3 proteins, ASPH, junctin, and junctate (or humbug), that differ significantly in their C-terminal domains. These ASPH gene products are expressed as five transcript variants that differ by their roles in calcium storage and release, hydroxylation capabilities, and tissue specificity. While all ASPH variants are expressed in skeletal muscle, only some are detected in heart, brain, pancreas, placenta, lung, liver, and kidney tissues. In the lumen of the endoplasmic reticulum, ASPH can be processed into two different forms.

REFERENCES

1. Korioth, F., et al. 1994. Cloning and characterization of the human gene encoding aspartyl β-hydroxylase. Gene 150: 395-399.
2. Dinchuk, J.E., et al. 2002. Absence of post-translational aspartyl β-hydroxylation of epidermal growth factor domains in mice leads to developmental defects and an increased incidence of intestinal neoplasia. J. Biol. Chem. 277: 12970-12977.
3. Franzini-Armstrong, C., et al. 2005. The assembly of calcium release units in cardiac muscle. Ann. N.Y. Acad. Sci. 1047: 76-85.
4. Feriotto, G., et al. 2005. Myocyte enhancer factor 2 activates promoter sequences of the human AβH-J-J locus, encoding aspartyl-β-hydroxylase, junctin, and junctate. Mol. Cell. Biol. 25: 3261-3275.
5. Kirchhefer, U., et al. 2006. Overexpression of junctin causes adaptive changes in cardiac myocyte Ca^{2+} signaling. Cell Calcium 39: 131-142.

CHROMOSOMAL LOCATION

Genetic locus: ASPH (human) mapping to 8q12.3; Asph (mouse) mapping to 4 A1.

SOURCE

ASPH (H-300) is a rabbit polyclonal antibody raised against amino acids 382-681 mapping within an internal region of ASPH 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.

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 or our catalog for detailed protocols and support products.

APPLICATIONS

ASPH (H-300) is recommended for detection of ASPH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

ASPH (H-300) is also recommended for detection of ASPH in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for ASPH siRNA (h): sc-44989, ASPH siRNA (m): sc-44990, ASPH shRNA Plasmid (h): sc-44989-SH, ASPH shRNA Plasmid (m): sc-44990-SH, ASPH shRNA (h) Lentiviral Particles: sc-44989-V and ASPH shRNA (m) Lentiviral Particles: sc-44990-V.

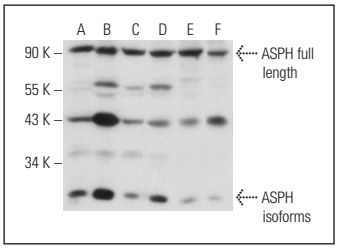
Molecular Weight of full-length ASPH: 90 kDa.

Molecular Weight of ASPH isoform Junctin: 26 kDa.

Molecular Weight of ASPH isoform Junctate: 32 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, PC-12 cell lysate: sc-2250 or KNRK whole cell lysate: sc-2214.

DATA



ASPH (H-300): sc-66939. Western blot analysis of ASPH expression in HeLa (**A**), AT-3 (**B**), PC-12 (**C**), KNRK (**D**), c4 (**E**) and A-10 (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Oddoux, S., et al. 2009. Triadin deletion induces impaired skeletal muscle function. J. Biol. Chem. 284: 34918-34929.

RESEARCH USE

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