SANTA CRUZ BIOTECHNOLOGY, INC.

ASPH (A-10): sc-271391

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 three 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.

CHROMOSOMAL LOCATION

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

SOURCE

ASPH (A-10) is a mouse monoclonal antibody raised against amino acids 382-681 mapping within an internal region of ASPH 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.

ASPH (A-10) is available conjugated to agarose (sc-271391 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-271391 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271391 PE), fluorescein (sc-271391 FITC), Alexa Fluor® 488 (sc-271391 AF488), Alexa Fluor® 546 (sc-271391 AF546), Alexa Fluor® 594 (sc-271391 AF594) or Alexa Fluor® 647 (sc-271391 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271391 AF680) or Alexa Fluor® 790 (sc-271391 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

ASPH (A-10) is recommended for detection of ASPH 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), immunohistochemistry (including paraffin-embedded sections) (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 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.

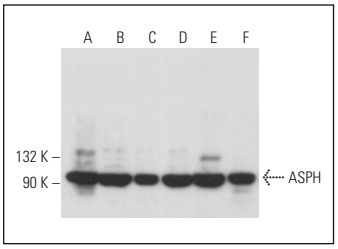
Molecular Weight of ASPH isoform Junctin: 26 kDa.

Molecular Weight of ASPH isoform Junctate: 32 kDa.

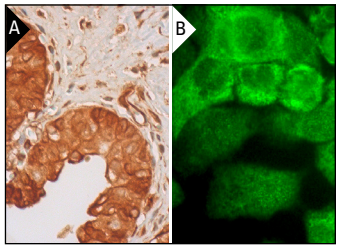
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ASPH (A-10): sc-271391. Western blot analysis of ASPH expression in HeLa (**A**), A-10 (**B**), PC-12 (**C**), KNRK (**D**), NIH/3T3 (**E**) and C3H/10T1/2 (**F**) whole cell lysates.



ASPH (A-10): sc-271391. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic and membrane staining of urothelial cells (**A**). Immunofluorescence staining of formalin-fixed A-431 cells showing cytoplasmic and membrane localization (**B**).

SELECT PRODUCT CITATIONS

1. Benelli, R., et al. 2020. Aspartate-β-hydroxylase: a promising target to limit the local invasiveness of colorectal cancer. Cancers 12: 971.
2. Zhang, Y., et al. 2020. Characterization of the relationship between the expression of aspartate β-hydroxylase and the pathological characteristics of breast cancer. Med. Sci. Monit. 26: e926752.

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.