

Aspartoacylase-3 (A-5): sc-393862

BACKGROUND

Aspartoacylase-3 (ACY3), also known as Aminoacylase-3, Aspartoacylase-2, acylase III or HCBP1 (hepatitis C virus core-binding protein 1), is a 319 amino acid protein that deacetylates mercapturic acids in the proximal tubules of the kidney, where it is predominantly expressed. A member of the aspA/astE family and Aspartoacylase subfamily, Aspartoacylase-3 localizes to the cytoplasm of S2 and S3 proximal tubules and to the apical domain of S1 proximal tubules. Aspartoacylase-3 is also expressed at low levels in stomach, testis, heart, brain, lung and liver, and may function as an HCV (Hepatitis C virus) core binding protein. Aspartoacylase-3 is encoded by a gene that maps to human chromosome 11, which houses over 1,400 genes and comprises nearly 4% of the human genome. Jervell and Lange-Nielsen syndrome, Jacobsen syndrome, Niemann-Pick disease, hereditary angioedema and Smith-Lemli-Opitz syndrome are associated with defects in genes that maps to chromosome 11.

REFERENCES

1. Fabiani, J.E., et al. 2000. Hereditary angioedema. Long-term follow-up of 88 patients. Experience of the Argentine allergy and immunology institute. *Allergol. Immunopathol.* 28: 267-271.
2. Jira, P.E., et al. 2003. Smith-Lemli-Opitz syndrome and the DHCR7 gene. *Ann. Hum. Genet.* 67: 269-280.
3. Pushkin, A., et al. 2004. Structural characterization, tissue distribution, and functional expression of murine aminoacylase III. *Am. J. Physiol., Cell Physiol.* 286: C848-C856.

CHROMOSOMAL LOCATION

Genetic locus: ACY3 (human) mapping to 11q13.2; Acy3 (mouse) mapping to 19 A.

SOURCE

Aspartoacylase-3 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 82-113 within an internal region of Aspartoacylase-3 of human origin.

PRODUCT

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

Aspartoacylase-3 (A-5) is available conjugated to agarose (sc-393862 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393862 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393862 PE), fluorescein (sc-393862 FITC), Alexa Fluor® 488 (sc-393862 AF488), Alexa Fluor® 546 (sc-393862 AF546), Alexa Fluor® 594 (sc-393862 AF594) or Alexa Fluor® 647 (sc-393862 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393862 AF680) or Alexa Fluor® 790 (sc-393862 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393862 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

Aspartoacylase-3 (A-5) is recommended for detection of Aspartoacylase-3 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 Aspartoacylase-3 siRNA (h): sc-96717, Aspartoacylase-3 siRNA (m): sc-141304, Aspartoacylase-3 shRNA Plasmid (h): sc-96717-SH, Aspartoacylase-3 shRNA Plasmid (m): sc-141304-SH, Aspartoacylase-3 shRNA (h) Lentiviral Particles: sc-96717-V and Aspartoacylase-3 shRNA (m) Lentiviral Particles: sc-141304-V.

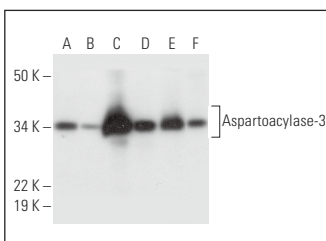
Molecular Weight of Aspartoacylase-3: 35 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, human kidney extract: sc-363764 or mouse kidney extract: sc-2255.

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



Aspartoacylase-3 (A-5): sc-393862. Western blot analysis of Aspartoacylase-3 expression in Ramos (A) and Hep G2 (B) whole cell lysates and mouse kidney (C), human kidney (D), mouse liver (E) and human liver (F) tissue extracts.

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.