

Aspartoacylase-3 (C-2): sc-393735

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 map to chromosome 11.

REFERENCES

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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.
4. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inherit. Metab. Dis.* 30: 654-663.
5. Bhuiyan, Z.A., et al. 2008. An intronic mutation leading to incomplete skipping of exon-2 in KCNQ1 rescues hearing in Jervell and Lange-Nielsen syndrome. *Prog. Biophys. Mol. Biol.* 98: 319-327.
6. Chen, Y.R., et al. 2009. Identification of a novel protein binding to hepatitis C virus core protein. *J. Gastroenterol. Hepatol.* 24: 1300-1304.
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CHROMOSOMAL LOCATION

Genetic locus: *Acy3* (mouse) mapping to 19 A.

SOURCE

Aspartoacylase-3 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 214-239 within an internal region of Aspartoacylase-3 of mouse origin.

STORAGE

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

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.

Blocking peptide available for competition studies, sc-393735 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Aspartoacylase-3 (C-2) is recommended for detection of Aspartoacylase-3 of mouse and rat 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 (m): sc-141304, Aspartoacylase-3 shRNA Plasmid (m): sc-141304-SH and Aspartoacylase-3 shRNA (m) Lentiviral Particles: sc-141304-V.

Molecular Weight of Aspartoacylase-3: 35 kDa.

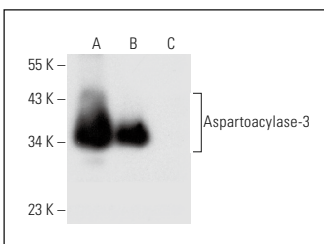
Positive Controls: mouse kidney extract: sc-2255, mouse liver extract: sc-2256 or c4 whole cell lysate: sc-364186.

RECOMMENDED SUPPORT REAGENTS

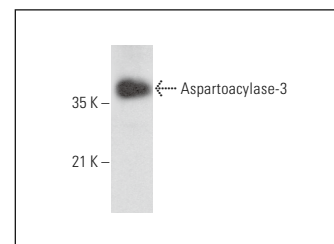
To ensure optimal results, the following support reagents are recommended:

- 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 (C-2): sc-393735. Western blot analysis of Aspartoacylase-3 expression in mouse kidney (A), mouse liver (B) and human liver (C) tissue extracts. Note lack of reactivity with human Aspartoacylase-3 in lane C.



Aspartoacylase-3 (C-2): sc-393735. Western blot analysis of Aspartoacylase-3 expression in c4 whole cell lysate.

RESEARCH USE

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