

# Aspartoacylase-3 (E-15): sc-167148

## 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 Argentinian 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.
4. Schuchman, E.H. 2007. The pathogenesis and treatment of acid sphingomyelinase-deficient Niemann-Pick disease. *J. Inher. 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.
7. Coldren, C.D., et al. 2009. Chromosomal microarray mapping suggests a role for BSX and Neurogranin in neurocognitive and behavioral defects in the 11q terminal deletion disorder (Jacobsen syndrome). *Neurogenetics* 10: 89-95.

## CHROMOSOMAL LOCATION

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

## SOURCE

Aspartoacylase-3 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Aspartoacylase-3 of human origin.

## RESEARCH USE

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

## 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-167148 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Aspartoacylase-3 (E-15) is recommended for detection of Aspartoacylase-3 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); non cross-reactive with Aspartoacylase.

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.

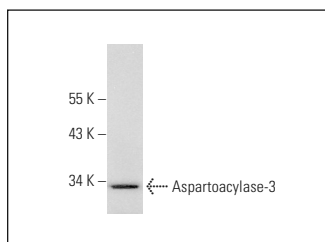
Molecular Weight of Aspartoacylase-3: 35 kDa.

Positive Controls: mouse kidney extract: sc-2255.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Aspartoacylase-3 (E-15): sc-167148. Western blot analysis of Aspartoacylase-3 expression in mouse kidney tissue extract.

## STORAGE

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