SANTA CRUZ BIOTECHNOLOGY, INC.

NAALADL1 (S-13): sc-138464

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Hydrolysis of the neuropeptide N-acetyl-L-aspartyl-L-glutamate (NAAG) by N-acetylated α-linked acidic dipeptidase (NAALADase) to release glutamate may be important in a number of neurodegenerative disorders in which excitotoxic mechanisms are implicated. NAALADL1 (N-acetylated α-linked acidic dipeptidase-like 1), also known as I100 or NAALADASEL, is a 740 amino acid single-pass type II membrane protein that localizes to the apical cell membrane. Belonging to the peptidase M28 family and the M28B subfamily, NAALADL1 is mainly expressed in the distal small intestine but is also expressed in spleen and tesits. NAALADL1 is considered a novel ileal brush border membrane protein, and is thought to have dipeptidyl-peptidase IV type activity. NAALADL1 exists as eight alternatively spliced isoforms and is encoded by a gene located on human chromosome 11q13.1.

REFERENCES

1. Shneider, B.L., et al. 1997. Cloning and characterization of a novel peptidase from rat and human ileum. J. Biol. Chem. 272: 31006-31015.
2. Bzdega, T., et al. 1997. Molecular cloning of a peptidase against N-acetylaspartylglutamate from a rat hippocampal cDNA library. J. Neurochem. 69: 2270-2277.
3. Sun, A.Q., et al. 1998. Sorting of rat liver and ileal sodium-dependent bile acid transporters in polarized epithelial cells. Am. J. Physiol. 275: G1045-G1055.
4. Pangalos, M.N., et al. 1999. Isolation and expression of novel human glutamate carboxypeptidases with N-acetylated α-linked acidic dipeptidase and dipeptidyl peptidase IV activity. J. Biol. Chem. 274: 8470-8483.
5. Neale, J.H., et al. 2000. N-Acetylaspartylglutamate: the most abundant peptide neurotransmitter in the mammalian central nervous system. J. Neurochem. 75: 443-452.
6. Bzdega, T., et al. 2004. The cloning and characterization of a second brain enzyme with NAAG peptidase activity. J. Neurochem. 89: 627-635.
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CHROMOSOMAL LOCATION

Genetic locus: NAALADL1 (human) mapping to 11q13.1; Naaladl1 (mouse) mapping to 19 A.

SOURCE

NAALADL1 (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of NAALADL1 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.

Blocking peptide available for competition studies, sc-138464 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

NAALADL1 (S-13) is recommended for detection of NAALADL1 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 NAALADL2 .

NAALADL1 (S-13) is also recommended for detection of NAALADL1 in additional species, including bovine and porcine.

Suitable for use as control antibody for NAALADL1 siRNA (h): sc-96596, NAALADL1 siRNA (m): sc-149792, NAALADL1 shRNA Plasmid (h): sc-96596-SH, NAALADL1 shRNA Plasmid (m): sc-149792-SH, NAALADL1 shRNA (h) Lentiviral Particles: sc-96596-V and NAALADL1 shRNA (m) Lentiviral Particles: sc-149792-V.

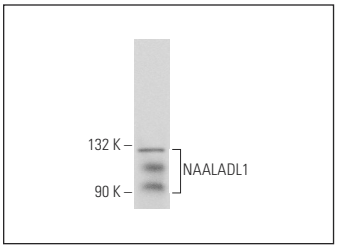
Molecular Weight of glycosylated NAALADL1: 100 kDa.

Positive Controls: mouse liver extract: sc-2256.

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



NAALADL1 (S-13): sc-138464. Western blot analysis of NAALADL1 expression in mouse liver tissue extract.

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.