

NAALADL1 Protein, Human, Recombinant (His)

General Information

Synonyms:	N-acetylated alpha-linked acidic dipeptidase-like 1;I100;N-acetylated α -linked acidic dipeptidase-like 1;NAALADASEL;NAALADL1
Protein Construction:	A DNA sequence encoding the extracellular domain of human NAALADL1 (NP_005459.2) (Pro 29-Leu 740) was expressed, with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UQQ1-1
Molecular Weight:	80 kDa (predicted); 90 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C . For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

N-acetylated-alpha-linked acidic dipeptidase-like protein, also known as NAALADL1, NAALADase L, and Ileal dipeptidyl-peptidase, is a Single-pass type II membrane protein and a member of the peptidase M28 family and M28B subfamily. NAALADase L is mainly expressed in the distal small intestine. It is also expressed in the spleen

and testis and Weakly expressed in the brain, locating mainly to the brain stem, amygdala, thalamus, and ventral striatum. NAALADase L is a chloride-activated, membrane-bound, metallopeptidase that cleaves the endogenous neuropeptide N-acetyl-aspartyl-glutamate (NAAG). NAAG acts as a partial NMDA agonist as well as a full agonist at the presynaptic metabotropic glutamate receptor 3 (mGluR3), where it acts to reduce glutamate release. NAALADase L also exhibits a dipeptidyl-peptidase IV type activity. NAALADase inhibition may be a novel therapeutic approach to reduce or inhibit heightened aggressiveness, and possibly to treat aggressive behavior associated with psychiatric disorders.

Reference

- Stauch BL. 1989, Neurosci Lett. 100 (1-3): 295-300.
Shneider BL. et al., 1997, J. Biol. Chem. 272: 31006-15.
Pangalos MN. et al., 1999, J. Biol. Chem. 274: 8470-83.
Thomas AG. et al., 1999, Brain Res. 843 (1-2): 48-52.

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