

Recombinant Mouse Nicastrin/NCSTN Protein (His Tag)

Catalog Number: PKSM040430

Note: Centrifuge before opening to ensure complete recovery of vial contents.

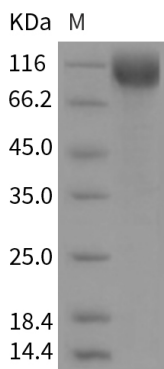
Description

| | |
|----------------------|--|
| Species | Mouse |
| Source | HEK293 Cells-derived Mouse Nicastrin/NCSTN protein Met1-Gln668, with an C-terminal His |
| Calculated MW | 73.0 kDa |
| Observed MW | 95-99 kDa |
| Accession | P57716 |
| Bio-activity | Not validated for activity |

Properties

| | |
|-----------------------|---|
| Purity | > 99 % as determined by reducing SDS-PAGE. |
| Endotoxin | < 1.0 EU per µg of the protein as determined by the LAL method. |
| Storage | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |
| Shipping | This product is provided as lyophilized powder which is shipped with ice packs. |
| Formulation | Lyophilized from sterile PBS, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual. |
| Reconstitution | Please refer to the printed manual for detailed information. |

Data



> 99 % as determined by reducing SDS-PAGE.

Background

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Nicastrin (NCST, or NCT), a single-pass membrane glycoprotein that harbors a large extracellular domain, is an essential component of the gamma-secretase complex. Several lines of evidence indicate that the members of these complexes could also contribute to the control of cell death. NCT controls cell death via phosphoinositide 3-kinase/Akt and p53-dependent pathways and that this function remains independent of the activity and molecular integrity of the gamma-secretase complexes. Increasing evidences have shown that Nicastrin/NCSTN plays a crucial role in gamma-cleavage of the amyloid precursor protein (APP). The glycoprotein Nicastrin is an essential component of the gamma-secretase complex, a high molecular weight complex which also contains the presenilin proteins, Aph-1 and Pen-2. The gamma-secretase complex is not only involved in APP processing but also in the processing of an increasing number of other type I integral membrane proteins. As the largest subunit of the gamma-secretase complex, Nicastrin plays a crucial role in its activation. Inhibition of NCSTN demonstrated an altered gamma-cleavage activity, suggesting its potential implication in developing Alzheimer's disease (AD). In addition, Nicastrin can function to maintain epithelial to mesenchymal transition during breast cancer progression. Anti-nicastrin polyclonal and monoclonal antibodies were able to decrease notch1 and vimentin expression and reduced the invasive capacity of breast cancer cells in vitro.

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