## **Recombinant Human Nicastrin/NCSTN Protein (His Tag)**

Catalog Number: PKSH031225



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

### **Description**

**Synonyms** APH2;ATAG1874;KIAA0253;NCSTN;RP11-517F10.1

Species Human

Expression Host HEK293 Cells
Sequence Met 1-Glu 669
Accession NP\_056146.1
Calculated Molecular Weight 72.4 kDa
Observed molecular weight 110-120 kDa
Tag C-His

### **Properties**

**Purity** > 93 % 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

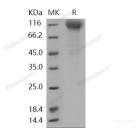
Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as

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



> 93 % as determined by reducing SDS-PAGE.

## **Background**

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 presentlin 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

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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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