



# Recombinant Protein Technical Manual

## Recombinant Mouse Nicastrin/NCSTN Protein (Fc Tag)

RPE3754

### Product Data:

**Product SKU:** RPE3754

**Size:** 20µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** P57716

### Protein Information:

**Molecular Mass:** 98.5 kDa

**AP Molecular Mass:** 117 kDa

**Tag:** C-Fc

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** 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

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** 9430068N19Rik;AA727311;Aph2;D1Dau13e;Kiaa0253;mKIAA0253;NCSTN;Nct

## Immunogen Information:

**Sequence:** Met1-Glu668

## 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 presenilin proteins, Aph 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.