Mouse Nicastrin / NCSTN Protein (His Tag)

Catalog Number: **50934-M08H**

General Information

Gene Name Synonym:

9430068N19Rik; AA727311; Aph2; D1Dau13e; Kiaa0253; mKIAA0253; NCSTN; Nct

Protein Construction:

A DNA sequence encoding the mouse NCSTN (P57716) (Met1-Gln668) was expressed with a C-terminal polyhistidine tag.

Source: Mouse

Expression Host: HEK293 Cells

QC Testing

Purity: > 99 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gly 28

Molecular Mass:

The recombinant mouse NCSTN comprises 652 amino acids and has a predicted molecular mass of 73 kDa. The apparent molecular mass of the protein is approximately 95-99 kDa in SDS-PAGE under reducing conditions due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

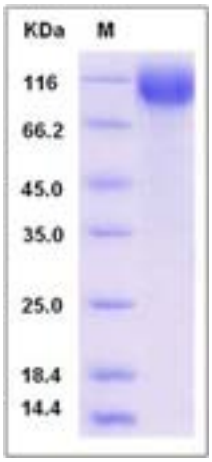
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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.

References

1.He G, *et al.* (2007) Degradation of nicastrin involves both proteasome and lysosome. J Neurochem. 101(4): 982-92. 2.Hayashi I, *et al.* (2009) Single chain variable fragment against nicastrin inhibits the gamma-secretase activity. J Biol Chem. 284(41): 27838-47. 3.Ma Z, *et al.* (2009) Association between promoter polymorphisms of the nicastrin gene and sporadic Alzheimer's disease in North Chinese Han population. Neurosci Lett. 458(3): 136-9.