

# Human CD10 / Neprilysin / MME Protein (His Tag)

Catalog Number: 10805-H07H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

CALLA; CD10; NEP; SFE

### Protein Construction:

A DNA sequence encoding the extracellular domain (Tyr 52-Trp 750) of human CD10 (NP\_000893.2) was fused with a polyhistidine tag at the N-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

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

### Bio Activity:

Measured by its ability to cleave the fluorogenic peptide substrate, Mca-RPPGFSAFK (Dnp)-OH, (R&D Systems, Catalog # ES005). The specific activity is >1,500 pmoles/min/μg.

### 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 °C

**Predicted N terminal:** His

### Molecular Mass:

The recombinant human CD10 consists of 718 amino acids and predicts a molecular mass of 82.2 kDa. As a result of glycosylation, rh CD10 migrates at approximately 95-105 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 20mM MES, 100mM NaCl, 1mM ZnCl<sub>2</sub>, 10% glycerol, pH 6.5.

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:

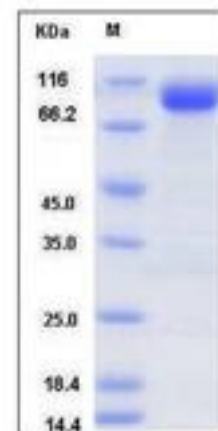
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

The cluster of differentiation (CD) system is commonly used as cell markers in immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. Cluster of differentiation 10 (CD10), also known as Neprilysin and neutral endopeptidase, is a member of the CD system. CD10 is a zinc-dependent metalloprotease enzyme that had function to degrade a number of small secreted peptides such as the amyloid beta peptide. It exist as a membrane-bound protein and have high concentration in kidney and lung tissues. Mutations in the CD10 gene can induce the familial forms of Alzheimer's disease, providing strong evidence for the protein's association with the Alzheimer's disease process. CD10 is also associated with other biochemical processes.

## References

1. Zola H, *et al.* (2007) CD molecules 2006-human cell differentiation molecules. *J Immunol Methods.* 318 (1-2): 1-5.
2. Ho IC, *et al.* (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. *Nat Rev Immunol.* 9 (2): 125-35.
3. Matesanz-Isabel J, *et al.* (2011) New B-cell CD molecules. *Immunology Letters.* 134 (2): 104-12

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For US Customer: Fax: 267-657-0217 • Tel: 215-583-7898

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