

Human ADAM12 Protein (His Tag)

Catalog Number: 10896-H08H



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

MCMP, MCMPMitna, MLTN, MLTNA, ADAM12

Protein Construction:

A DNA sequence encoding the human ADAM12 isoform 1 (NP_003465.3) extracellular domain (Met 1-Ser 513) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 98 % as determined by SDS-PAGE

Bio-Activity

Measured by its binding ability in a functional ELISA.
Immobilized human ADAM12-His (Cat: 10896-H08H) at 10 µg/ml (100 µl/well) can bind biotinylated mouse FLRG-His (Cat: 10591-M08H) with a linear range of 0.31-1.25 µg/ml.

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: Arg 29

Molecular Mass:

The recombinant human ADAM12 consists of 496 amino acids and predicts a molecular mass of 55.2 kDa. As a result of glycosylation, rhADAM12 migrates as three bands with apparent molecular mass of 27, 55 and 72 kDa corresponding to the propeptide, the mature form and the pro form respectively in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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

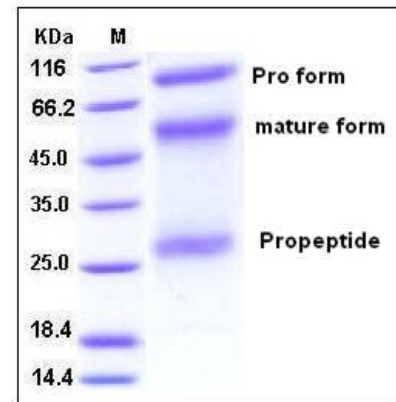
Usage Guide

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.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Disintegrin and metalloproteinase domain-containing protein 12, also known as ADAM12 and Meltrin alpha, is a member of the ADAM protein family. Members of this family are membrane-anchored proteins structurally related to snake venom disintegrins, and have been implicated in a variety of biological processes involving cell-cell and cell-matrix interactions, including fertilization, muscle development, and neurogenesis. ADAM12 is an active metalloprotease, and has been implicated in insulin-like growth factor (IGF) receptor signaling, through cleavage of IGF-binding proteins, and in epidermal growth factor receptor (EGFR) pathways, via ectodomain shedding of membrane-tethered EGFR ligands. ADAM12 contains one disintegrin domain, one EGF-like domain and one peptidase M12B domain. It is involved in skeletal muscle regeneration, specifically at the onset of cell fusion. It is also involved in macrophage-derived giant cells (MGC) and osteoclast formation from mononuclear precursors. ADAM12 possesses extracellular metalloprotease and cell-binding functions, as well as intracellular signaling capacities. Interest in ADAM12 has increased because its expression is related to tumor progression and it is a potential biomarker for breast cancer.

References

1. Gilpin, B.J. et al., 1998, J Biol Chem. 273 (1): 157-66.
2. Galliano, M.F. et al., 2000, J. Biol. Chem. 275 (18): 13933-9.
3. Kveiborg, M. et al., 2008, Int J Biochem Cell Biol 40 (9): 1685-702.
4. Valinen, Y. 2009, J Matern Fetal Neonatal Med. 22 (7): 602-7.

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