

Recombinant Human ADAM12 Protein (His Tag)

Catalog Number: PKSH031367

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

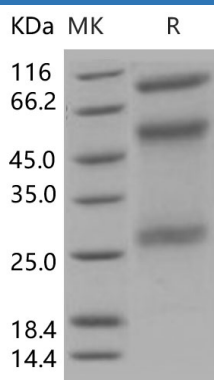
Description

Species	Human
Source	HEK293 Cells-derived Human ADAM12 protein Met 1-Ser 513, with an C-terminal His
Calculated MW	55.2 kDa
Observed MW	27&55&72 kDa
Accession	NP_003465.3
Bio-activity	Measured by its binding ability in a functional ELISA. Immobilized human ADAM12-His at 10 µg/ml (100 µl/well) can bind biotinylated mouse FLRG-His with a linear range of 0.31-1.25 µg/ml.

Properties

Purity	> 98 % 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% Tween 80 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



> 98 % as determined by reducing SDS-PAGE.

Background

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The ADAMs (a disintegrin and metalloprotease) comprise a family of multidomain proteins with metalloprotease, cell adhesion, and signaling activities. Human ADAM12, which is implicated in diseases such as cancer, is expressed in two splice forms, the transmembrane ADAM12-L and the shorter and soluble ADAM12-S. ADAM12, also known as and Meltrin alpha, is a member of the ADAM protein family, which contains one disintegrin domain, one EGF-like domain and one peptidase M12B domain. ADAM12 is synthesized as a zymogen with the prodomain keeping the metalloprotease inactive through a cysteine-switch mechanism. Maturation and activation of the protease involves the cleavage of the prodomain in the trans-Golgi or possibly at the cell surface by a furin-peptidase. It is a membrane-anchored metalloprotease, which has been implicated in activation-inactivation of growth factors that play an important role in wound healing, including heparin-binding epidermal growth factor (EGF)-like growth factor (HB-EGF) and IGF binding proteins. ADAM12 may also regulate cell-cell and cell-extracellular matrix contacts through interactions with cell surface receptors - integrins and syndecans - potentially influencing the actin cytoskeleton. Moreover, ADAM12 interacts with several cytoplasmic signaling and adaptor molecules through its intracellular domain, thereby directly transmitting signals to or from the cell interior. These ADAM12-mediated cellular effects appear to be critical events in both biological and pathological processes.

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