# Recombinant Human ADAM15

Catalog Number: 9234-AD

## DESCRIPTION

| | |
|---|---|
| **Source** | Chinese Hamster Ovary cell line, CHO-derived<br>Asp207-Ser693 with a C-terminal 10-His tag<br>Accession # Q13444 |
| **N-terminal Sequence Analysis** | Asp207 |
| **Predicted Molecular Mass** | 53 kDa |

## SPECIFICATIONS

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|---|---|
| **SDS-PAGE** | 67-79 kDa, reducing conditions |
| **Activity** | Measured by its ability of the immobilized protein to support the adhesion of Jurkat human acute T cell leukemia cells.<br>The $ED_{50}$ for this effect is 0.5-3 µg/mL |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in MES and NaCl. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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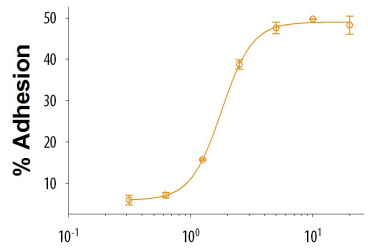
|---|---|
| **Reconstitution** | Reconstitute at 500 µg/mL in water. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## DATA

**Bioactivity**




Immobilized Recombinant Human ADAM15 (Catalog # 9234-AD) supports the adhesion of Jurkat human acute T cell leukemia cells. The $ED_{50}$ for this effect is 0.5-3 µg/mL.



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## BACKGROUND

A disintegrin and metalloproteinase 15 (ADAM15), also known as MDC15 and Metargin, is an approximately 110 kDa transmembrane member of the M12B family of peptidases (1). Human ADAM15 is synthesized with a 189 amino acid (aa) propeptide that contains a cysteine switch motif. The 75 kDa activated form of human ADAM15 (after removal of the propeptide) consists of a 490 aa extracellular domain (ECD) with a peptidase, disintegrin, cysteine-rich, and EGF-like domain followed by a 21 aa transmembrane segment and a 146 aa cytoplasmic domain (2). Within the ECD, human ADAM15 shares 85% aa sequence identity with mouse and rat ADAM15. Alternative splicing generates multiple additional isoforms with various deletions or substitutions in the cytoplasmic domain, deletion in the propeptide and peptidase domains, or truncation at the beginning of the EGF-like domain (3, 4). ADAM15 is widely expressed, including on colonic epithelial cells, smooth muscle cells, vascular endothelial cells, and it is upregulated during chronic inflammation and tumor progression (5-8). It is also expressed on spermatocytes where both propeptide and the protease domain are cleaved during spermatocyte maturation (9, 10). ADAM15 promotes endothelial permeability, T cell adhesion, MMP-9 production and activation, and tumor cell metastasis (6, 8, 11, 12). It binds to Integrin αV β3 (13) and mediates the proteolytic shedding of cell surface N-Cadherin, E-Cadherin, MICB, CD23/Fcε RII, and FGF R2 (IIb) (6, 7, 14-16).

**References:**

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