

Recombinant Human ADAM12, C13&N15-labeled

Cat. No. ADAM12-216H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human ADAM12 MS Standard Protein, C13 and N15-labeled (ADAM12, Heavy Labeled) Arg 29 - Asp 513 (Accession # AAH60804.1) was produced in human 293 cells (HEK293).
Species	Human
Source	HEK293
ProteinLength	29-513 a.a.
Description	A Disintegrin And Metalloprotease 12 (ADAM12) also known as Meltrin-alpha and MCMP, is a member of the ADAM and MDC (Metalloprotease, Disintegrin, Cysteine-rich) 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 in diverse processes such as asthma, development, angiogenesis and cancer through their activities in cell adhesion/fusion, membrane protein shedding, and signal transduction. Over 30 members have been identified and about half of them are active metalloproteases such as ADAM8, 9, 10, 12 and 17/TACE. ADAM12 has four Isoform, Isoform 1 is expressed in placenta and skeletal, cardiac, and smooth muscle. Isoform 2 seems to be expressed only in placenta or in embryo and fetus. Both forms were expressed in some tumor cells lines. ADAM12 Involved in skeletal muscle regeneration, specifically at the onset of cell fusion and also involved in macrophage-derived giant cells (MGC) and osteoclast formation from mononuclear precursors.

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Form	Lyophilized from 0.22 µm filtered solution in 50 mM Tris, 100 mM NaCl, pH7.0-7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.
Molecular Mass	ADAM12, Heavy Labeled, fused with 6×His tag at the C-terminus, has a calculated MW of 55.2 kDa (Pro) and 34 kDa (Mature) . The predicted N-terminus is Arg 29. DTT-reduced Protein migrates as 28 kDa, 44 kDa and 68 kDa due to glycosylation, corresponding to
Endotoxin	Less than 1.0 EU per µg of the ADAM12, Heavy Labeled by the LAL method.
Purity	>98% as determined by SDS-PAGE.
Storage	Avoid repeated freeze-thaw cycles.No activity loss was observed after storage at:In lyophilized state for 1 year (4oC-8oC); After reconstitution under sterile conditions for 1 month (4oC-8oC) or 3 months (-20oC to -70oC).

GENE INFORMATION

Gene Name	ADAM12 ADAM metallopeptidase domain 12 [Homo sapiens]
Official Symbol	ADAM12
Synonyms	ADAM12; ADAM metallopeptidase domain 12; a disintegrin and metalloproteinase domain 12 (meltrin alpha); disintegrin and metalloproteinase domain-containing protein 12; MCMPMltna; meltrin alpha; MLTN; meltrin-alpha; MCMP; MLTNA;
Gene ID	8038
mRNA Refseq	NM_003474
Protein Refseq	NP_003465

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MIM	602714
UniProt ID	O43184
Chromosome Location	10q26
Pathway	Disease, organism-specific biosystem; Notch signaling pathway, organism-specific biosystem; Signal Transduction, organism-specific biosystem; Signaling by EGFR, organism-specific biosystem; Signaling by EGFR in Cancer, organism-specific biosystem; Syndecan-4-mediated signaling events, organism-specific biosystem;
Function	SH3 domain binding; metal ion binding; metalloendopeptidase activity; metallopeptidase activity; peptidase activity; protein binding; zinc ion binding;

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