

Active Recombinant Mouse Ecm1 protein, His-tagged

Cat. No. Ecm1-363M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Mouse Ecm1(AAla20-Glu559) fused with His tag at C-terminal was expressed in NS0.
Species	Mouse
Source	Mammalian Cells
ProteinLength	Ala20-Glu559
Description	Extracellular matrix protein-1 (ECM-1, ECM-1a) is an 85 kDa, secreted glycoprotein important in connective tissue organization. Of identified splice variants, the 559 amino acid (aa) form, ECM-1a is most widely expressed, with highest expression in the placenta, heart, and developing bones. ECM-1b (434 aa) is found only in tonsil and skin, where it is associated with suprabasal keratinocytes. Mouse ECM-1 contains a 19 aa signal peptide and a 540 aa secreted portion that includes an N-terminal proline-rich, cysteine-free region, two tandem repeat domains, and a C-terminal domain. Mature mouse ECM-1 shares 90% aa identity with rat ECM-1 and 65 - 69% aa identity with corresponding isoforms of human, equine, bovine and canine ECM-1. There are six repeats of a CC(X7 - 10)C motif (x = any aa) within the tandem repeat and C-terminal domains. These motifs, also found in members of the albumin family, are expected to form two (in ECM-1b) or three (in ECM-1a) "double loop" structures that are involved in ligand binding to extracellular matrix molecules such as fibulin-1, perlecan, laminin 332, and fibronectin. ECM-1 is over-expressed in many malignant epithelial tumors and has demonstrated angiogenic activity. A role in

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regulating alkaline phosphatase during endochondral bone formation has also been suggested. In humans, loss of function within the tandem repeat regions due to mutation is considered causative of thickened and irregular extracellular matrix within connective tissue, called lipoid proteinosis (10). Autoantibodies in the skin disease lichen sclerosis also target these repeats. The phenotypes of these diseases support a role for ECM-1 as a “biological glue” in the dermis.

Predicted N Terminal	Ala20
Form	Lyophilized from a 0.2 µm filtered solution in PBS.
Bio-activity	Measured by the ability of the immobilized protein to support the adhesion of BUD-8 human fibroblast cells. When 2.5 x 10⁴ cells/well are added to rmECM-1 coated plates (5 µg/mL, 100 µL/well), approximately 55-85% will adhere after 60 minutes at 37° C. Optimal dilutions should be determined by each laboratory for each application.
Molecular Mass	Predicted Molecular Mass: 61.8 (monomer) kDa; SDS-PAGE: 80-90 kDa, reducing conditions.
Endotoxin	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain
Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 centigrade as supplied. 1 month, 2 to 8 centigrade under sterile conditions after reconstitution. 3 months, -20 to -70 centigrade under sterile conditions after reconstitution.
Reconstitution	Reconstitute at 300 µg/mL in PBS.

Shipping

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

GENE INFORMATION

Gene Name Ecm1 extracellular matrix protein 1 [Mus musculus]

Official Symbol Ecm1

Synonyms ECM1; extracellular matrix protein 1; secretory component p85; p85; AI663821;

Gene ID 13601

mRNA Refseq NM_001252653

Protein Refseq NP_001239582

UniProt ID Q61508

Chromosome Location 3 F2.1; 3 40.91 cM

Function enzyme binding; interleukin-2 receptor binding; laminin binding; protease binding; protein C-terminus binding; signal transducer activity;

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