

ECM1 (G-7): sc-515843



The Power to Question

BACKGROUND

ECM1 (extracellular matrix protein 1), also known as secretory component p85, is a secreted glycoprotein that is essential for the proper structure and function of the skin. It is widely expressed and localizes to the extracellular matrix. ECM1 binds to a variety of extracellular matrix components, including Perlecan, Fibulin and matrix metalloproteinase-9 (MMP-9), and participates in the structural organization of the dermis. In addition, ECM1 enhances the association of Collagen Type IV with Laminin 332 suggesting that it is a key player in interstitial dermis and the dermal-epidermal junction. Mutations in the gene encoding ECM1 result in the autosomal recessive disorder lipoid proteinosis (LiP). LiP is characterized by hyalinization of the dermis and reduplication of the basement membrane of the skin. LiP patients exhibit thickening of the skin and mucosae. Four splice variants (known as ECM1a-ECM1d) exist for ECM1.

REFERENCES

- Horev, L., et al. 2005. A novel splice-site mutation in ECM-1 gene in a consanguineous family with lipoid proteinosis. *Exp. Dermatol.* 14: 891-897.
- Fujimoto, N., et al. 2005. Extracellular matrix protein 1 interacts with the domain III of fibulin-1C and 1D variants through its central tandem repeat 2. *Biochem. Biophys. Res. Commun.* 333: 1327-1333.
- Kebebew, E., et al. 2005. ECM1 and TMPRSS4 are diagnostic markers of malignant thyroid neoplasms and improve the accuracy of fine needle aspiration biopsy. *Ann. Surg.* 242: 361-363.
- Lupo, I., et al. 2005. A novel mutation of the extracellular matrix protein 1 gene (ECM1) in a patient with lipoid proteinosis (Urbach-Wiethe disease) from Sicily. *Br. J. Dermatol.* 153: 1019-1022.
- Fujimoto, N., et al. 2006. Extracellular matrix protein 1 inhibits the activity of matrix metalloproteinase 9 through high-affinity protein/protein interactions. *Exp. Dermatol.* 15: 300-307.
- Sander, C.S., et al. 2006. Expression of extracellular matrix protein 1 (ECM1) in human skin is decreased by age and increased upon ultraviolet exposure. *Br. J. Dermatol.* 154: 218-224.
- Chan, I., et al. 2007. The molecular basis of lipoid proteinosis: mutations in extracellular matrix protein 1. *Exp. Dermatol.* 16: 881-890.
- Sercu, S., et al. 2007. Functional redundancy of extracellular matrix protein 1 in epidermal differentiation. *Br. J. Dermatol.* 157: 771-775.

CHROMOSOMAL LOCATION

Genetic locus: ECM1 (human) mapping to 1q21.3.

SOURCE

ECM1 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 126-152 within an internal region of ECM1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

ECM1 (G-7) is recommended for detection of ECM1 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ECM1 siRNA (h): sc-62255, ECM1 shRNA Plasmid (h): sc-62255-SH and ECM1 shRNA (h) Lentiviral Particles: sc-62255-V.

Molecular Weight of ECM1: 85 kDa.

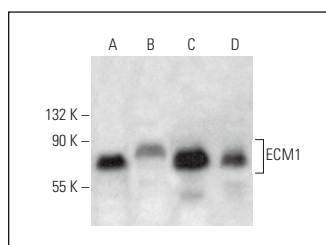
Positive Controls: K-562 whole cell lysate: sc-2203, MDA-MB-435S whole cell lysate: sc-364184 or A-375 cell lysate: sc-3811.

RECOMMENDED SUPPORT REAGENTS

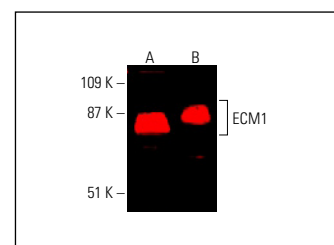
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ECM1 (G-7): sc-515843. Western blot analysis of ECM1 expression in K-562 (A), A-375 (B) and MDA-MB-435S (C) whole cell lysates and human epididymis tissue extract (D).



ECM1 (G-7): sc-515843. Near-infrared western blot analysis of ECM1 expression in A-375 whole cell lysate (A) and human epididymis tissue extract (B). Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

- Steinhaeuser, S.S., et al. 2020. ECM1 secreted by HER2-overexpressing breast cancer cells promotes formation of a vascular niche accelerating cancer cell migration and invasion. *Lab. Invest.* 100: 928-944.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.