SANTA CRUZ BIOTECHNOLOGY, INC.

ECM1 (M-18): sc-65085

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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

1. Horev, L., et al. 2005. A novel splice-site mutation in ECM1 gene in a consanguineous family with lipoid proteinosis. Exp. Dermatol. 14: 891-897.
2. 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.
3. 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.
4. 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: 353-361.
5. 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.
6. 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.
7. Chan, I., et al. 2007. The molecular basis of lipoid proteinosis: mutations in extracellular matrix protein 1. Exp. Dermatol. 16: 881-890.
8. Sercu, S., et al. 2007. Functional redundancy of extracellular matrix protein 1 in epidermal differentiation. Br. J. Dermatol. 157: 771-775.
9. Sercu, S., et al. 2008. Interaction of extracellular matrix protein 1 with extracellular matrix components: ECM1 is a basement membrane protein of the skin. J. Invest. Dermatol. E-published ahead of print.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: Ecm1 (mouse) mapping to 3 F2.1.

SOURCE

ECM1 (M-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ECM1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-65085 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ECM1 (M-18) is recommended for detection of ECM1 of mouse origin by Western Blotting (starting dilution 1:200, 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 (m): sc-62256, ECM1 shRNA Plasmid (m): sc-62256-SH and ECM1 shRNA (m) Lentiviral Particles: sc-62256-V.

Molecular Weight of ECM1: 85 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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