

Multimerin-1 (E-18): sc-104426

BACKGROUND

Multimerin-1, also known as MMRN1, EMILIN-4 or ECM (endothelial cell multimerin), is a 1,228 amino acid secreted protein that contains one C1q domain, one EMI domain and one EGF-like domain. Synthesized in megakaryocytes and endothelial cells and present in liver, lung and placenta, Multimerin-1 exists as a multimeric structure composed of varying disulfide-linked multimers and functions as a carrier protein for platelet factors (specifically platelet factor V), playing a role in the stabilization and storage of factor V in platelets. In addition, Multimerin-1 acts as a ligand for select Integrins and may participate in extracellular matrix adhesion. Defects in the gene encoding Multimerin-1 that lead to Multimerin-1 deficiency are associated with autosomal dominant bleeding disorders due to platelet factor malfunction. Multiple isoforms of Multimerin-1 exist due to alternative splicing events.

REFERENCES

- Hayward, C.P., et al. 1995. The cDNA sequence of human endothelial cell Multimerin. A unique protein with RGDS, coiled-coil, and epidermal growth factor-like domains and a carboxyl terminus similar to the globular domain of complement C1q and collagens type VIII and X. *J. Biol. Chem.* 270: 18246-18251.
- Hayward, C.P., et al. 1998. Studies of Multimerin in human endothelial cells. *Blood* 91: 1304-1317.
- Torres, M.D., et al. 2000. The human Multimerin gene MMRN maps to chromosome 4q22. *Cytogenet. Cell Genet.* 88: 275-277.
- Jeimy, S.B., et al. 2004. Identification of the MMRN1 binding region within the C2 domain of human factor V. *J. Biol. Chem.* 279: 51466-51471.
- Hayward, C.P., et al. 2004. Human platelets contain forms of factor V in disulfide-linkage with multimerin. *Thromb. Haemost.* 92: 1349-1357.
- Adam, F., et al. 2005. Analyses of cellular Multimerin-1 receptors: *in vitro* evidence of binding mediated by α IIb β 3 and α v β 3. *Thromb. Haemost.* 94: 1004-1011.

CHROMOSOMAL LOCATION

Genetic locus: MMRN1 (human) mapping to 4q22.1.

SOURCE

Multimerin-1 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Multimerin-1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-104426 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Multimerin-1 (E-18) is recommended for detection of Multimerin-1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with family member Multimerin-2.

Multimerin-1 (E-18) is also recommended for detection of Multimerin-1 in additional species, including equine and canine.

Suitable for use as control antibody for Multimerin-1 siRNA (h): sc-89230, Multimerin-1 shRNA Plasmid (h): sc-89230-SH and Multimerin-1 shRNA (h) Lentiviral Particles: sc-89230-V.

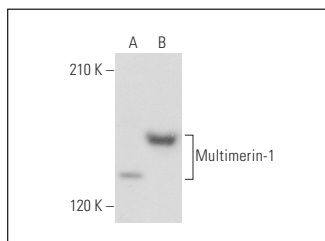
Molecular Weight of Multimerin-1: 138 kDa.

Positive Controls: U-251-MG whole cell lysates: sc-364176 or human liver extract: sc-363766.

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.

DATA



Multimerin-1 (E-18): sc-104426. Western blot analysis of Multimerin-1 expression in U-251-MG whole cell lysate (A) and human liver tissue extract (B).

RESEARCH USE

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

PROTOCOLS

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