

# Multimerin-1 (S-14): sc-104428

## 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  $\alpha$ IIb $\beta$ 3 and  $\alpha$ v $\beta$ 3. *Thromb. Haemost.* 94: 1004-1011.

## CHROMOSOMAL LOCATION

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

## SOURCE

Multimerin-1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Multimerin-1 of human origin.

## PRODUCT

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

Blocking peptide available for competition studies, sc-104428 P, (100  $\mu$ 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 (S-14) 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  $\mu$ g per 100-500  $\mu$ 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.

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.

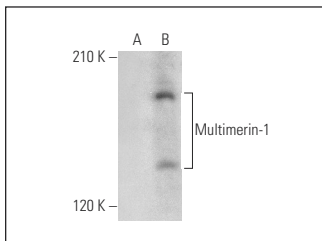
Molecular Weight of Multimerin-1: 138 kDa.

Positive Controls: Multimerin-1 (h): 293T Lysate: sc-373115 or HUV-EC-C whole cell lysate: sc-364180.

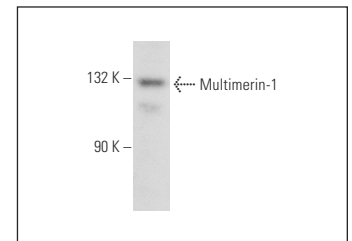
## RECOMMENDED SECONDARY REAGENTS

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 (S-14): sc-104428. Western blot analysis of Multimerin-1 expression in non-transfected: sc-117752 (A) and human Multimerin-1 transfected: sc-373115 (B) 293T whole cell lysates.



Multimerin-1 (S-14): sc-104428. Western blot analysis of Multimerin-1 expression in HUV-EC-C whole cell lysate.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.