

# Endomucin (V.1A7): sc-53940

## BACKGROUND

Mucin-like membrane glycoproteins contain many serine and threonine residues, which carry large amounts of O-linked glycans, forcing the molecule into an extended structure. Endomucin encodes a 261 amino acid protein, which contains a transmembrane sequence and multiple glycosylation sites. Human Endomucin is highly expressed in vascular tissues such as heart, kidney and lung. Mouse Endomucin is an endothelial antigen found in venous endothelium, as well as capillaries, but not on arterial endothelium. Endomucin expression is increased while endothelial cells are proliferating or are stimulated by tumor-conditioned media or specific angiogenic factors such as bFGF (basic fibroblast growth factor) and TNF $\alpha$ . Two types of Endomucin are identified that are termed Endomucin-1 and Endomucin-2. Exogenously expressed human Endomucin-1/-2 are modified into glycoproteins. Both Endomucin-1 and Endomucin-2 negatively regulate cell adhesion to the extracellular matrix. Overexpression of Endomucin-1 inhibits adhesion and aggregation of hematopoietic cells, suggesting that Endomucin-1 may play a role in detachment of hematopoietic cells from endothelium during early hematopoiesis.

## REFERENCES

1. Cyster, J.G., et al. 1991. The dimensions of the T lymphocyte glycoprotein leukosialin and identification of linear protein epitopes that can be modified by glycosylation. *EMBO J.* 10: 893-902.
2. Morgan, S.M., et al. 1999. Biochemical characterization and molecular cloning of a novel endothelial-specific sialomucin. *Blood* 93: 165-175.
3. Ueno, M., et al. 2001. Endomucin is expressed in embryonic dorsal aorta and is able to inhibit cell adhesion. *Biochem. Biophys. Res. Commun.* 287: 501-506.
4. Liu, C., et al. 2001. Human Endomucin is an endothelial marker. *Biochem. Biophys. Res. Commun.* 288: 129-136.
5. Kinoshita, M., et al. 2001. Identification of human Endomucin-1 and -2 as membrane-bound O-sialoglycoproteins with anti-adhesive activity. *FEBS Lett.* 499: 121-126.

## CHROMOSOMAL LOCATION

Genetic locus: Emcn (mouse) mapping to 3 G3.

## SOURCE

Endomucin (V.1A7) is a rat monoclonal antibody raised against bEND.3 endothelioma of mouse origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Endomucin (V.1A7) is available conjugated to either phycoerythrin (sc-53940 PE) or fluorescein (sc-53940 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## RESEARCH USE

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

## APPLICATIONS

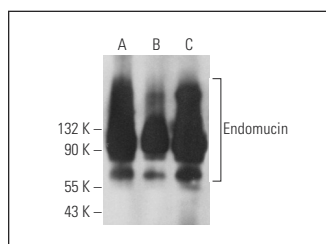
Endomucin (V.1A7) is recommended for detection of Endomucin of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); not recommended for detection of human Endomucin.

Suitable for use as control antibody for Endomucin siRNA (m): sc-43155, Endomucin shRNA Plasmid (m): sc-43155-SH and Endomucin shRNA (m) Lentiviral Particles: sc-43155-V.

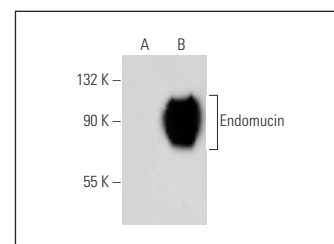
Molecular Weight of Endomucin: 80 kDa.

Positive Controls: Endomucin (m): 293T Lysate: sc-120037, mouse lung extract: sc-2390 or mouse heart extract: sc-2254.

## DATA



Endomucin (V.1A7): sc-53940. Western blot analysis of Endomucin expression in mouse kidney (A), mouse heart (B) and mouse lung (C) tissue extracts.



Endomucin (V.1A7): sc-53940. Western blot analysis of Endomucin expression in non-transfected: sc-117752 (A) and mouse Endomucin transfected: sc-120037 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Hahn, N., et al. 2012. KLEIP deficiency in mice causes progressive corneal neovascular dystrophy. *Invest. Ophthalmol. Vis. Sci.* 53: 3260-3268.
2. Li, Y., et al. 2019. Artesunate, an anti-malaria agent, attenuates experimental osteoarthritis by inhibiting bone resorption and CD31hiEmcnhi vessel formation in subchondral bone. *Front. Pharmacol.* 10: 685.

## 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](http://www.scbt.com) for detailed protocols and support products.

## CONJUGATES

See **Endomucin (V.7C7): sc-65495** for Endomucin antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor<sup>®</sup> 488, 546, 594, 647, 680 and 790.