

Endomucin (V.7C7): sc-65495

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, also known as EMCN or Mucin-14, is a 261 amino acid protein which contains a transmembrane sequence and multiple glycosylation sites. Human Endomucin, which is highly expressed in vascular tissues such as heart, kidney and lung, exists as both an unprocessed precursor peptide and as a 241 amino acid processed protein, known as Endomucin 2. 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 α . Overexpression of Endomucin inhibits adhesion and aggregation of hematopoietic cells, suggesting that Endomucin may play a role in detachment of hematopoietic cells from endothelium during early hematopoiesis.

CHROMOSOMAL LOCATION

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

SOURCE

Endomucin (V.7C7) is a rat monoclonal antibody raised against bEND.3 endothelioma of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Endomucin (V.7C7) is available conjugated to agarose (sc-65495 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65495 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65495 PE), fluorescein (sc-65495 FITC), Alexa Fluor[®] 488 (sc-65495 AF488), Alexa Fluor[®] 546 (sc-65495 AF546), Alexa Fluor[®] 594 (sc-65495 AF594) or Alexa Fluor[®] 647 (sc-65495 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-65495 AF680) or Alexa Fluor[®] 790 (sc-65495 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Endomucin (V.7C7) is recommended for detection of Endomucin of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ 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.

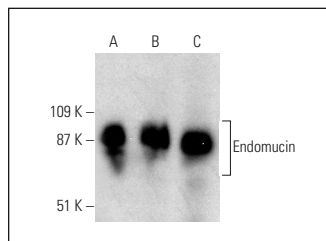
Molecular Weight of Endomucin: 80 kDa.

Positive Controls: mouse kidney extract: sc-2255, mouse lung extract: sc-2390 or mouse adrenal gland extract: sc-364237.

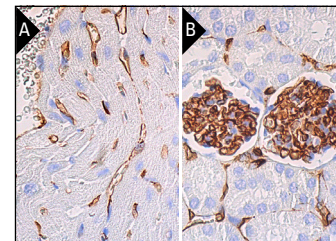
STORAGE

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

DATA



Endomucin (V.7C7) HRP: sc-65495 HRP. Direct western blot analysis of Endomucin expression in mouse adrenal gland (A), mouse kidney (B) and mouse lung (C) tissue extracts.



Endomucin (V.7C7): sc-65495. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse heart muscle tissue showing membrane and cytoplasmic staining of endothelial cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse kidney tissue showing membrane and cytoplasmic staining of cells in glomeruli and endothelial cells (B).

SELECT PRODUCT CITATIONS

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- Debrincat, M.A., et al. 2012. Mcl-1 and Bcl-x_l coordinately regulate megakaryocyte survival. *Blood* 119: 5850-5858.
- Gil-Henn, H., et al. 2013. Arg/Abl2 promotes invasion and attenuates proliferation of breast cancer *in vivo*. *Oncogene* 32: 2622-2630.
- Ramasamy, S.K., et al. 2014. Endothelial Notch activity promotes angiogenesis and osteogenesis in bone. *Nature* 507: 376-380.
- Zhou, Y., et al. 2015. Sox7, Sox17, and Sox18 cooperatively regulate vascular development in the mouse retina. *PLoS ONE* 10: e0143650.
- Merk, H., et al. 2016. Inhibition of endothelial Cdk5 reduces tumor growth by promoting non-productive angiogenesis. *Oncotarget* 7: 6088-6104.
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- Duarte, D., et al. 2018. Inhibition of endosteal vascular niche remodeling rescues hematopoietic stem cell loss in AML. *Cell Stem Cell* 22: 64-77.
- Stone, O.A. and Stainier, D.Y.R. 2019. Paraxial mesoderm is the major source of lymphatic endothelium. *Dev. Cell* 50: 247-255.e3.
- Demircioglu, F., et al. 2020. Cancer associated fibroblast FAK regulates malignant cell metabolism. *Nat. Commun.* 11: 1290.

RESEARCH USE

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

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