SANTA CRUZ BIOTECHNOLOGY, INC.

MECA-79 (MECA-79): sc-19602

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The activation of lymphocytes in response to various cellular functions leads to the appearance of different glycoproteins on the surface of the cell. These glycoproteins contain unique carbohydrate epitopes that participate in the lymphocyte response to cellular inflammation. MECA-79 is a carbohydrate epitope that is found on a family of sialomucins known as peripheral node addressins, or PNAds, that serve as ligands for CD62L. Expressed primarily on PNAds that are present in both inflamed tissues and on high endothelial venules (HEVs) in lymphoid tissues, the MECA-79 epitope binds to CD62L and, via this binding, induces leukocyte homing and lymphocyte rolling and tethering. The initiation of homing and rolling is critical for the localization of lymphocytes to peripheral lymph nodes, an event that is necessary for the cellular response to inflammation.

REFERENCES

1. Bistrup, A., et al. 2004. Detection of a sulfotransferase (HEC-GlcNAc6ST) in high endothelial venules of lymph nodes and in high endothelial venule-like vessels within ectopic lymphoid aggregates: relationship to the MECA-79 epitope. Am. J. Pathol. 164: 1635-1644.
2. Browning, J.L., et al. 2005. Lymphotoxin-β receptor signaling is required for the homeostatic control of HEV differentiation and function. Immunity 23: 539-550.

SOURCE

MECA-79 (MECA-79) is a rat monoclonal antibody raised against lymph node stromal cells of mouse origin.

PRODUCT

Each vial contains 200 µg IgM in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for blocking, sc-19602 L, 200 µg/0.1 ml.

MECA-79 (MECA-79) is available conjugated to agarose (sc-19602 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-19602 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; and to either phycoerythrin (sc-19602 PE), fluorescein (sc-19602 FITC), Alexa Fluor® 488 (sc-19602 AF488) or Alexa Fluor® 647 (sc-19602 AF647), 200 µg/ml, for IF, IHC(P) and FCM.

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APPLICATIONS

MECA-79 (MECA-79) is recommended for detection of peripheral lymph node HEV of mouse, rat and human 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Positive Controls: mouse lymph node extract: sc-364243, human lymph node extract: sc-363768 or human tonsil tissue extract: sc-364263.

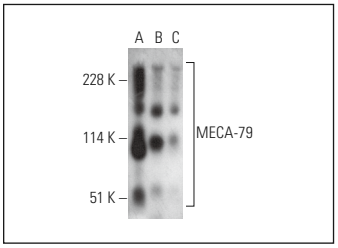
RESEARCH USE

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

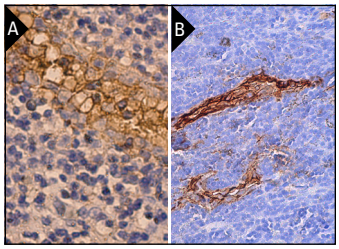
STORAGE

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

DATA



MECA-79 (MECA-79) HRP: sc-19602 HRP. Direct western blot analysis of MECA-79 expression in mouse lymph node (**A**), human lymph node (**B**) and human tonsil (**C**) tissue extracts.



MECA-79 (MECA-79): sc-19602. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lymph node tissue showing membrane and cytoplasmic staining of cells in high endothelial venules (**B**).

SELECT PRODUCT CITATIONS

1. Hickman, H.D., et al. 2008. Direct priming of antiviral $CD8^+$ T cells in the peripheral interfollicular region of lymph nodes. Nat. Immunol. 9: 155-165.
2. Okayama, H., et al. 2011. Ectopic expression of MECA-79 as a novel prognostic indicator in gastric cancer. Cancer Sci. 102: 1088-1094.
3. Kohn, L.A., et al. 2012. Lymphoid priming in human bone marrow begins before expression of CD10 with upregulation of L-Selectin. Nat. Immunol. 13: 963-971.
4. Banerjee, P., et al. 2013. Proinflammatory cytokines induced altered expression of cyclooxygenase-2 gene results in unreceptive endometrium in women with idiopathic recurrent spontaneous miscarriage. Fertil. Steril. 99: 179-187.e2.
5. Ladányi, A., et al. 2014. Ectopic lymphoid structures in primary cutaneous melanoma. Pathol. Oncol. Res. 20: 981-985.
6. Mokhtar, H.M., et al. 2014. Testosterone decreases the expression of endometrial pinopode and L-Selectin ligand (MECA-79) in adult female rats during uterine receptivity period. Int. J. Clin. Exp. Pathol. 7: 1967-1976.
7. Ichimiya, T., et al. 2014. Frequent glycan structure mining of influenza virus data revealed a sulfated glycan motif that increased viral infection. Bioinformatics 30: 706-711.
8. Subramani, E., et al. 2016. Dysregulated leukemia inhibitory factor and its receptor regulated signal transducers and activators of transcription 3 pathway: a possible cause for repeated implantation failure in women with dormant genital tuberculosis? Fertil. Steril. 105: 1076-1084.e5.

PROTOCOLS

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