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Mouse anti VCAM-1

Catalogue number: **MUB1905P**

Clone	4B9
Isotype	IgG1
Product Type	Primary Antibodies
Units	0.1 mg
Host	Mouse (Balb/c)
Species reactivity	Human
Application	Flow cytometry Immunohistochemistry (frozen) Immunoprecipitation

Distributors

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Background

Vascular cell adhesion molecule-1 (VCAM-1) is induced on Human umbilical vein endothelium (HUVE) by recombinant Human tumor necrosis factor - α (rh TNF- α), rh interleukin-1 (IL-1) and lipopolysaccharide (LPS) and is involved in adherence of lymphocytic cell lines to HUVE. VCAM-1 is only minimally expressed on unstimulated endothelium. Molecular cloning and sequencing of VCAM-1 predicts a 69-kDa core protein with 6 potential N-linked glycosylation sites, if the protein is fully glycosylated a mature protein of about 90kDa is yielded. VCAM-1 mediates a component of the adherence of Peripheral Blood Lymphocytes (PBL) to rh TNF-stimulated HUVE, this CD18 independent mechanism of lymphocyte adherence to cytokine stimulated endothelium may be an important pathway of lymphocyte emigration at sites of inflammation and immune reaction.

Source

4B9 is a Mouse IgG1 monoclonal antibody generated by immunization of Balb/c mice with Human umbilical vein endothelium (HUVE) that were non-enzymatically harvested after stimulation for 24h with recombinant Human (rh) TNF- α (10 ng/ml). Splenocytes were fused with the NS-1 nonsecretory murine myeloma line.

Product

Each vial contains 100 μ l 1 mg/ml purified monoclonal antibody in PBS containing 0.09% sodium azide.

Applications

4B9 is suitable for immunoblotting, immunoprecipitation, immunocytochemistry and immuno-histochemistry on frozen

tissues and flow cytometry. Optimal antibody dilution should be determined by titration; recommended range is 1:25 – 1:200 for flow cytometry, and for immunohistochemistry with avidin-biotinylated Horseradish peroxidase complex (ABC) as detection reagent, and 1:100 – 1:1000 for immunoblotting applications.

Specificity

The antibody binds exclusively to the cytokine-induced endothelial cell adhesion protein, vascular cell adhesion molecule-1 (VCAM-1).

Storage

Store at 4°C, or in small aliquots at -20°C.

References

1. Carlos, T., Schwartz, B., Kovach, N., Yee, E., Rosa, M., Osborn, L., Chi-Rosso, G., Newman, B., Lobb, R., et al. (1990). Vascular cell adhesion molecule-1 mediates lymphocyte adherence to cytokine-activated cultured Human endothelial cells *Blood*. 76(5) 965-70.
2. Ockenhouse, C.F., Tegoshi, T., Maeno, Y., Benjamin, C., Ho, M., Kan, K.E., Thway, Y., Win, K., Aikawa, M. and Lobb, R.R. (1992). Human vascular endothelial cell adhesion receptors for Plasmodium falciparum-infected erythrocytes: roles for endothelial leukocyte adhesion molecule 1 and vascular cell adhesion molecule 1. *J Exp Med*. 176, 1183-9.
3. Bacchi, C.E., Marsh, C.L., Perkins, J.D., Carithers, R.L. Jr, McVicar, J.P., Hudkins, K.L., Benjamin, C.D., Harlan, J.M., Lobb, R. and Alpers, C.E. (1993). Expression of vascular cell adhesion molecule (VCAM-1) in liver and pancreas allograft rejection. *Am J Pathol*. 142, 579-91.
4. Pinola, M., Saksela, E., Tiisala, S. and Renkonen, R. (1994). Human NK cells expressing alpha 4 beta 1/beta 7 adhere to VCAM-1 without preactivation. *Scand J Immunol*. 39, 131-6.
5. Chuluyan, H.E., Osborn, L., Lobb, R. and Issekutz AC. (1995). Domains 1 and 4 of vascular cell adhesion molecule-1 (CD106) both support very late activation antigen-4 (CD49d/CD29)-dependent monocyte trans-endothelial migration. *J Immunol*. 155, 3135-4.

Caution

This product is intended FOR RESEARCH USE ONLY, and FOR TESTS IN VITRO, not for use in diagnostic or therapeutic procedures involving humans or animals. This product contains sodium azide. To prevent formation of toxic vapors, do not mix with strong acidic solutions. To prevent formation of potentially explosive metallic azides in metal plumbing, always wash into drain with copious quantities of water. This datasheet is as accurate as reasonably achievable, but Nordic-MUBio accepts no liability for any inaccuracies or omissions in this information.