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#62133**CD54/ICAM-1 (VF27-516) Mouse mAb**

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: IF-IC, FC-FP, FC-L	Reactivity: H	Sensitivity: Endogenous	Source/Isotype: Mouse IgG1	UniProt ID: #P05362	Entrez-Gene Id: 3383
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Product Usage Information**Application**

Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)
Flow Cytometry (Live)

Dilution

1:500
1:200 - 1:800
1:200 - 1:800

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

CD54/ICAM-1 (VF27-516) Mouse mAb recognizes endogenous levels of total CD54/ICAM-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with SDS denatured, formalin fixed cultured COLO-38 human melanoma cells.

Background

Intercellular cell adhesion molecule-1 (CD54 or ICAM-1) is a cell surface glycoprotein that belongs to the immunoglobulin superfamily (IgSF) of adhesion molecules. CD54 is expressed at low levels in diverse cell types, and is induced by cytokines (TNF- α , interleukin-1) and bacterial lipopolysaccharide (1). Apical localization of CD54 on endothelial cells (or basolateral localization on epithelial cells) is a prerequisite for leukocyte trafficking through the endothelial (or epithelial) barrier (1). Apical expression of CD54 on epithelial cells mediates pathogen invasion as well as host defense, a pattern also observed in tumors (1). CD54 also functions as a co-stimulator on antigen presenting cells, binding to its receptor LFA-1 (leukocyte function-associated antigen-1) on the surface of T cells during antigen presentation (2). Cross-linking of CD54 or binding to its ligand triggers activation of Src family kinases and the Rho/ROCK pathway (3-7). Phosphorylation on Tyr485 of CD54 is required for its association with SHP-2 (5). SHP-2 seems essential for CD54-induced Src activation (7).

Background References

- Hopkins, A.M. et al. (2004) *Adv Drug Deliv Rev* 56, 763-78.
- Nishibori, M. et al. (2003) *J Pharmacol Sci* 92, 7-12.
- Holland, J. and Owens, T. (1997) *J Biol Chem* 272, 9108-12.
- Etienne, S. et al. (1998) *J Immunol* 161, 5755-61.
- Pluskota, E. et al. (2000) *J Biol Chem* 275, 30029-36.
- Muro, S. et al. (2003) *J Cell Sci* 116, 1599-609.
- Wang, Q. et al. (2003) *J Biol Chem* 278, 47731-43.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Applications Key

IF-IC: Immunofluorescence (Immunocytochemistry) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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