

Store at
-20°C
#67836**CD54/ICAM-1 (E3Q9N) XP® Rabbit mAb**

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-Bond, IHC-P	H Mk	Endogenous	89, 92	Rabbit IgG	#P05362	3383

Product Usage Information**Application**

Western Blotting
IHC Leica Bond
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:100 - 1:400
1:100 - 1:400

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.

For a carrier-free (BSA and azide free) version of this product see product #26104.

Specificity/Sensitivity

CD54/ICAM-1 (E3Q9N) XP® Rabbit mAb recognizes endogenous levels of total CD54/ICAM-1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro410 of human CD54/ICAM-1 protein.

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

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

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human **Mk:** Monkey

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