

#4915 Store at -20°C

CD54 (ICAM-1) Antibody



✓ 100 µl
(10 western blots)

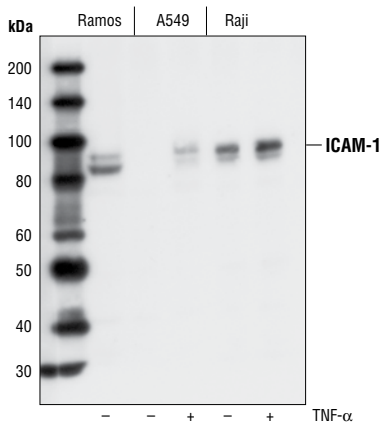
Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

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This product is for *in vitro* research use only and is not intended for use in humans or animals.
This product is not intended for use as a therapeutic or in diagnostic procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IHC-P Endogenous	H	89, 92 kDa	Rabbit**

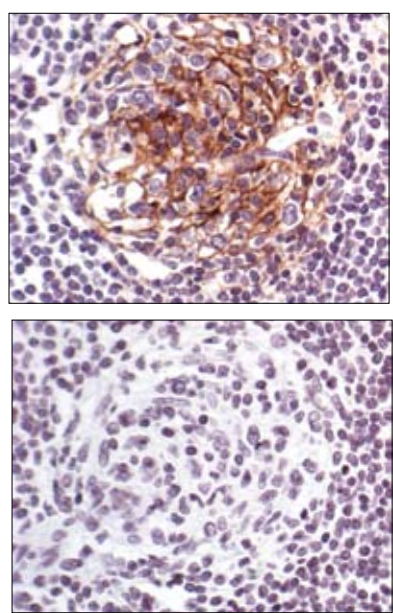
Background: Intercellular cell adhesion molecule-1 (ICAM-1), also known as CD54, is a cell surface glycoprotein that belongs to the immunoglobulin superfamily (IgSF) of adhesion molecules. ICAM-1 is expressed at low levels on diverse cell types, and is induced by cytokines (TNF α , interleukine-1) and bacterial lipopolysaccharide (1). Apical localization of ICAM-1 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 ICAM-1 on epithelial cells mediates pathogen invasion as well as host defense, and this pattern is also observed in tumors (1). ICAM-1 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 ICAM-1 or binding to its ligands triggers activation of Src family kinases as well the Rho/ROCK pathway (3-7). Phosphorylation on Tyr485 of ICAM-1 is required for its association with SHP-2 (5). SHP-2 seems essential for ICAM-1-induced Src activation (7).



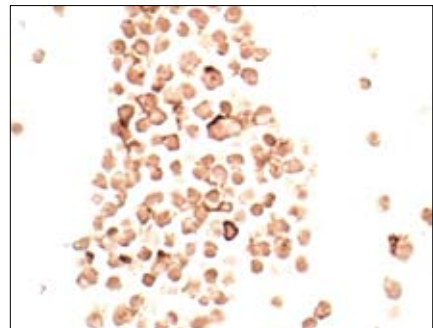
Western blot analysis of extracts from Ramos, A549, or Raji cells, treated with TNF- α as indicated, using ICAM-1 Antibody.

Specificity/Sensitivity: ICAM-1 Antibody detects endogenous levels of total ICAM-1 protein. The antibody does not cross-react with other IgSF adhesion molecules.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to residues of human ICAM-1. Antibodies are purified by protein A and peptide affinity chromatography.



Immunohistochemical analysis of paraffin-embedded human lymph node, using ICAM-1 Antibody in the presence of control peptide (upper) or antigen specific peptide (lower).



Immunohistochemical analysis of paraffin-embedded Raji cells, using ICAM-1 Antibody.

Entrez-Gene ID #3383
Swiss-Prot Acc. #P05362

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

*Species cross-reactivity is determined by western blot.
**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:
Western blotting 1:1000
Immunohistochemistry (Paraffin) 1:25
IHC protocol: Unmasking buffer/Antibody diluent
Citrate/ SignalStain® Antibody Diluent #8112

Please visit www.cellsignal.com for a complete listing of recommended companion products.

For application specific protocols please see the web page for this product at www.cellsignal.com.

- Background References:**
- Hopkins, A.M. et al. (2004) *Adv. Drug Deliv. Rev.* 56, 763-778.
 - Nishibori, M. et al. (2003) *J. Pharmacol. Sci.* 92, 7-12.
 - Holland, J. and Owens, T. (1997) *J. Biol. Chem.* 272, 9108-9112.
 - Etienne, S. et al. (1998) *J. Immunol.* 161, 5755-5761.
 - Pluskota, E. et al. (2000) *J. Biol. Chem.* 275, 30029-30036.
 - Muro, S. et al. (2003) *J. Cell Sci.* 116, 1599-1609.
 - Wang, Q. et al. (2004) *J. Biol. Chem.* 278, 47731-47743.

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