Revision 1

Store at -20C

#5441

CEACAM1 Antibody

Cell Signaling TECHNOLOGY®

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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, IP	H	Endogenous	140-160	Rabbit	#P13688	634

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

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.

Specificity/Sensitivity

CEACAM1 Antibody detects endogenous levels of total CEACAM1 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala460 of human CEACAM1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

CEACAM1 (also known as C-CAM and CD66a) is a member of CEA-related cell-adhesion molecule (CEACAM) subfamily of the carcinoembryonic antigen (CEA) family (1). CEACAM1 is expressed by certain epithelial, endothelial, lymphoid, and myeloid cells. Human CEACAM1 has many different splice variants; the abundance of CEACAM1 and the relative ratio of the different isoforms varies markedly among cell types and may be regulated in a context-dependent fashion. The isoforms with long (L) and short (S) cytoplasmic tails have different signaling properties. Notably, L isoforms contain a functional ITIM (immunoreceptor tyrosine-based inhibitory motif) and several serine and threonine residues that could serve as potential phosphorylation targets. The extracellular domain of CEACAM1 is heavily glycosylated, making its apparent molecular weight during electrophoresis much larger than its predicted size (57.6 kDa) (2). CEACAM1 mediates intercellular adhesion through homo- and heterophilic interaction with other members of the CEACAM family. Studies indicate that CEACAM1 plays important roles in angiogenesis, neovascularization, insulin signaling, T cell signaling, and tumorigenesis (3-8). In addition, CEACAM1 can function as a receptor for several microbial pathogens (9,10).

Background References

1. Kuespert, K. et al. (2006) *Curr Opin Cell Biol* 18, 565-71.
2. Gray-Owen, S.D. and Blumberg, R.S. (2006) *Nat Rev Immunol* 6, 433-46.
3. Horst, A.K. et al. (2006) *J Clin Invest* 116, 1596-605.
4. Ergün, S. et al. (2000) *Mol Cell* 5, 311-20.
5. Kammerer, R. et al. (2001) *J Immunol* 166, 6537-44.
6. Poy, M.N. et al. (2002) *Nat Genet* 30, 270-6.
7. Hsieh, J.T. et al. (1995) *Cancer Res* 55, 190-7.
8. Leung, N. et al. (2006) *Oncogene* 25, 5527-36.
9. Hemmila, E. et al. (2004) *J Virol* 78, 10156-65.
10. Voges, M. et al. (2010) *BMC Microbiol* 10, 117.

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 **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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