Revision 4

Store at -20C

#13403

CD9 (D3H4P) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IHC-P	H	Endogenous	22, 24, 35	Rabbit IgG	#P21926	928

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunohistochemistry (Paraffin)	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 #73765.

Specificity/Sensitivity

CD9 (D3H4P) Rabbit mAb recognizes endogenous levels of total CD9 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val178 of human CD9 protein.

Background

The CD9 antigen belongs to the tetraspanin family of cell surface glycoproteins, and is characterized by four transmembrane domains, one short extracellular domain (ECL1), and one long extracellular domain (ECL2). Tetraspanins interact with a variety of cell surface proteins and intracellular signaling molecules in specialized tetraspanin-enriched microdomains (TEMs), where they mediate a range of processes including adhesion, motility, membrane organization, and signal transduction (1). Research studies demonstrate that CD9 expression on the egg is required for gamete fusion during fertilization (2-4). CD9 was also shown to play a role in dendritic cell migration, megakaryocyte differentiation, and homing of cord blood CD34+ hematopoietic progenitors to the bone marrow (5-7). In addition, downregulation of CD9 expression is associated with poor prognosis and progression of several types of cancer (8-10). Additional research identified CD9 as an abundant component of exosomes, and may play some role in the fusion of these secreted membrane vesicles with recipient cells (11).

Background References

1. Hemler, M.E. (2005) *Nat Rev Mol Cell Biol* 6, 801-11.
2. Le Naour, F. et al. (2000) *Science* 287, 319-21.
3. Miyado, K. et al. (2000) *Science* 287, 321-4.
4. Kaji, K. et al. (2000) *Nat Genet* 24, 279-82.
5. Mantegazza, A.R. et al. (2004) *Blood* 104, 1183-90.
6. Clay, D. et al. (2001) *Blood* 97, 1982-9.
7. Leung, K.T. et al. (2011) *Blood* 117, 1840-50.
8. Miyake, M. et al. (1995) *Cancer Res* 55, 4127-31.
9. Higashiyama, M. et al. (1995) *Cancer Res* 55, 6040-4.
10. Uchida, S. et al. (1999) *Br J Cancer* 79, 1168-73.
11. Théry, C. et al. (1999) *J Cell Biol* 147, 599-610.

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-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: Human

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