CD9 (D3H4P) Rabbit mAb

**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. 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, down regulation 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).

**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.

**Recommended Antibody Dilutions:**
- Western blotting: 1:1000
- Immunohistochemistry (Paraffin): 1:200†
- Unmasking buffer: Citrate
- Detection reagent: SignalStain® Boost (HRP, Rabbit) #8114
- Antibody diluent: SignalStain® Antibody Diluent #8112
- SignalStain® Boost IHC Detection Reagent

**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.

**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.

**Recommended Companion Products:**
- SignalStain® Boost IHC Detection Reagent
- SignalStain® Antibody Diluent
- SignalStain® Boost IHC Detection Reagent

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**Background References:**
Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing Myc/DDK-tagged full-length human CD9 protein (hCD9-Myc/DDK; +), using CD9 (D3H4P) Rabbit mAb.

Immunohistochemical analysis of paraffin-embedded ovarian carcinoma using CD9 (D3H4P) Rabbit mAb in the presence of control peptide (left) or antigen-specific peptide (right).

Immunohistochemical analysis of paraffin-embedded breast carcinoma using CD9 (D3H4P) Rabbit mAb.