



1A-567-C025

## Monoclonal Antibody to CD9 (mouse) Allophycocyanin (APC) conjugated (0.025 mg)

<b>Clone:</b>	EM-04
<b>Isotype:</b>	Rat IgG1
<b>Specificity:</b>	The rat monoclonal antibody EM-04 recognizes CD9 antigen, a 24 kDa transmembrane protein expressed on platelets, monocytes, pre-B lymphocytes, granulocytes and activated T lymphocytes.
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Permeabilized murine bone marrow-derived mast cells (BMMC).
<b>Species Reactivity:</b>	Mouse
<b>Preparation:</b>	The purified antibody is conjugated with cross-linked Allophycocyanin (APC) under optimum conditions. The conjugate is purified by size-exclusion chromatography.
<b>Concentration:</b>	0.5 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
<b>Usage:</b>	The reagent is designed for Flow Cytometry analysis. Suggested working concentration is 6 µg/ml. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	CD9 belongs to proteins of tetraspanin family that orchestrate cholesterol-associated tetraspanin-enriched signaling microdomains within the plasma membrane, forming complexes with each other as well as with integrins, membrane-anchored growth factors and other proteins. CD9 is involved in cell motility, osteoclastogenesis, neurite outgrowth, myotube formation, and sperm-egg fusion, plays roles in cell attachment and proliferation and is necessary for association of heterologous MHC II molecules on the dendritic cell plasma membrane which is important for effective T cell stimulation. CD9 is also considered as metastasis suppressor in solid tumors.

**For laboratory research only, not for drug, diagnostic or other use.**

**Antibodies**

- References:**
- \*Schmidt C, Künemund V, Wintergerst ES, Schmitz B, Schachner M: CD9 of mouse brain is implicated in neurite outgrowth and cell migration in vitro and is associated with the alpha 6/beta 1 integrin and the neural adhesion molecule L1. *J Neurosci Res.* 1996 Jan 1;43(1):12-31.
  - \*Le Naour F, Rubinstein E, Jasmin C, Prenant M, Boucheix C: Severely reduced female fertility in CD9-deficient mice. *Science.* 2000 Jan 14;287(5451):319-21.
  - \*Liu WM, Cao YJ, Yang YJ, Li J, Hu Z, Duan EK: Tetraspanin CD9 regulates invasion during mouse embryo implantation. *J Mol Endocrinol.* 2006 Feb;36(1):121-30.
  - \*Unternaehrer JJ, Chow A, Pypaert M, Inaba K, Mellman I: The tetraspanin CD9 mediates lateral association of MHC class II molecules on the dendritic cell surface. *Proc Natl Acad Sci U S A.* 2007 Jan 2;104(1):234-9.
  - \*Kotha J, Zhang C, Longhurst CM, Lu Y, Jacobs J, Cheng Y, Jennings LK: Functional relevance of tetraspanin CD9 in vascular smooth muscle cell injury phenotypes: a novel target for the prevention of neointimal hyperplasia. *Atherosclerosis.* 2009 Apr;203(2):377-86.
  - \*Athman JJ, Wang Y, McDonald DJ, Boom WH, Harding CV, Wearsch PA: Bacterial Membrane Vesicles Mediate the Release of Mycobacterium tuberculosis Lipoglycans and Lipoproteins from Infected Macrophages. *J Immunol.* 2015 Aug 1;195(3):1044-53.

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