



1B-567-C100

Monoclonal Antibody to CD9 (mouse) Biotin conjugated (0.1 mg)

Clone:	EM-04
Isotype:	Rat IgG1
Specificity:	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.
Regulatory Status:	RUO
Immunogen:	Permeabilized murine bone marrow-derived mast cells (BMMC).
Species Reactivity:	Mouse
Preparation:	The purified antibody is conjugated with Biotin-LC-NHS under optimum conditions. The reagent is free of unconjugated biotin.
Concentration:	1 mg/ml
Storage Buffer:	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
Storage / Stability:	Store at 2-8°C. Do not freeze. Do not use after expiration date stamped on vial label.
Usage:	Reagent is designed for flow cytometry analysis.
Expiration:	See vial label
Lot Number:	See vial label
Background:	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.
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 - *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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