

## Technical Data Sheet

## Purified NA/LE Rat Anti-Mouse CD9

## Product Information

<b>Material Number:</b>	553758
<b>Size:</b>	0.5 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	KMC8
<b>Immunogen:</b>	(C57BL/6 x DBA/2)F1 mouse bone marrow-derived stromal cell line BMS2
<b>Isotype:</b>	Rat (LOU) IgG2a, $\kappa$
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	No azide/low endotoxin: Aqueous buffered solution containing no preservative, 0.2 $\mu$ m sterile filtered. Endotoxin level is $\leq$ 0.01 EU/ $\mu$ g ( $\leq$ 0.001 ng/ $\mu$ g) of protein as determined by the LAL assay.

## Description

The KMC8 antibody reacts with CD9, a 24-kDa member of the transmembrane 4 superfamily. In the mouse, CD9 is present on bone marrow myeloid cells, stromal cells, and megakaryocyte-committed progenitors; subsets of peripheral T and B lymphocytes; and neutrophils, platelets, dendritic cells, and bone marrow-derived macrophages. CD9 has been found to be associated with integrins and other cell-surface receptors, and it is suggested to play a role in signal transduction and possibly in regulating cellular adhesive properties. It has also been demonstrated to participate in T-cell costimulation and induction of apoptosis. The KMC8 antibody has been reported to block certain CD9 functions and activate macrophages

## Preparation and Storage

Store undiluted at 4°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

This preparation contains no preservatives, thus it should be handled under aseptic conditions.

## Application Notes

## Application

Flow cytometry	Routinely Tested
Immunohistochemistry-frozen	Tested During Development
(Co)-stimulation	Reported
Blocking	Reported
Immunofluorescence	Reported
Immunoprecipitation	Reported
Western blot	Reported

## Suggested Companion Products

Catalog Number	Name	Size	Clone
553926	Purified NA/LE Rat IgG2a $\kappa$ Isotype Control	0.5 mg	R35-95
554016	FITC Goat Anti-Rat Ig	0.5 mg	Polyclonal

## Product Notices

- Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- Please refer to [www.bdbiosciences.com/pharmingen/protocols](http://www.bdbiosciences.com/pharmingen/protocols) for technical protocols.

## References

Jennings LK, Crossno JT Jr, Fox CF, White MM, Green CA. Platelet p24/CD9, a member of the tetraspanin family of proteins. *Ann N Y Acad Sci.* 1994; 714:175-184. (Biology)

Kaji K, Takeshita S, Miyake K, Takai T, Kudo A. Functional association of CD9 with the Fc gamma receptors in macrophages. *J Immunol.* 2001; 166(5):3256-3265. (Clone-specific: Activation)

Miyake K, Medina KL, Hayashi S, Ono S, Hamaoka T, Kincade PW. Monoclonal antibodies to Pgp-1/CD44 block lympho-hemopoiesis in long-term bone marrow cultures. *J Exp Med.* 1990; 171(2):477-488. (Immunogen)

Nakorn TN, Miyamoto T, Weissman IL. Characterization of mouse clonogenic megakaryocyte progenitors. *Proc Natl Acad Sci U S A.* 2003; 100(1):205-210. (Biology)

Oritani K, Wu X, Medina K. Antibody ligation of CD9 modifies production of myeloid cells in long-term cultures. *Blood.* 1996; 87(6):2252-2261. (Immunogen: Blocking, Immunoprecipitation, Western blot)

Park CS, Yashiro Y, Tai XG, et al. Differential involvement of a Fas-CPP32-like protease pathway in apoptosis of TCR/CD9-costimulated, naive T cells and TCR-restimulated, activated T cells. *J Immunol.* 1998; 160(12):5790-5796. (Biology)

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Pulendran B, Lingappa J, Kennedy MK, et al. Developmental pathways of dendritic cells in vivo: distinct function, phenotype, and localization of dendritic cell subsets in FLT3 ligand-treated mice. *J Immunol.* 1997; 159(5):2222-2231. (Clone-specific: Immunofluorescence)

Tachibana I, Hemler ME. Role of transmembrane 4 superfamily (TM4SF) proteins CD9 and CD81 in muscle cell fusion and myotube maintenance. *J Cell Biol.* 1999; 146(4):893-904. (Clone-specific: Blocking)

Tanio Y, Yamazaki H, Kunisada T, Miyake K, Hayashi SI. CD9 molecule expressed on stromal cells is involved in osteoclastogenesis. *Exp Hematol.* 1999; 27(5):853-859. (Clone-specific: Blocking)

Wright MD, Tomlinson MG. The ins and outs of the transmembrane 4 superfamily. *Immunol Today.* 1994; 15(12):588-594. (Biology)