

CD9 Monoclonal Antibody (eBioKMC8 (KMC8)), FITC, eBioscience™

Catalog Number 11-0091-81

Product data sheet

Details	
Size	50 µg
Host/Isotope	Rat / IgG2a, kappa
Class	Monoclonal
Type	Antibody
Clone	eBioKMC8 (KMC8)
Conjugate	FITC
Form	Liquid
Concentration	0.5 mg/mL
Storage Conditions	4° C, store in dark, DO NOT FREEZE!

Species Reactivity	
Species reactivity	Mouse
Published species	Mouse, Not Applicable
Tested Applications	
Flow Cytometry (Flow)	1 µg/test
Published Applications	
Flow Cytometry (Flow)	See 1 publications below

* Suggested working dilutions are given as a guide only. It is recommended that the user titrate the product for use in their own experiment using appropriate negative and positive controls.

Product specific information

Description: The eBioKMC8 monoclonal antibody reacts with mouse CD9, a 24 kDa member of the transmembrane 4 superfamily. This family is characterized by the presence of four hydrophobic domains spanning the cell membrane and short N- and C-terminal cytoplasmic domains. CD9 is expressed by several cell types including monocytes, macrophages, platelets, early B cells, activated B and T cells, dendritic cells, eosinophils, basophils, endothelial cells, myoblasts and neuroblasts. On T cells, CD9 functions as a co-stimulatory molecule on naive T cells. Furthermore, CD9 is expressed in oocytes, and CD9-deficiency results in sterility caused by defective gamete fusion. In mouse macrophages, CD9 functionally associates with FcγR2b to modify signals for phagocytosis and inflammatory responses. In mouse B cells, it was discovered that CD9 is a marker for marginal zone B cells, B1 cells, and plasma cells. In dendritic cells, recently it was demonstrated that CD9 facilitates the association of heterologous MHC II molecules. The level of CD9 expression is subject to donor variability. Applications Reported: This eBioKMC8 (KMC8) antibody has been reported for use in flow cytometric analysis. Applications Tested: This eBioKMC8 (KMC8) antibody has been tested by flow cytometric analysis of mouse splenocytes and bone marrow cells. This can be used at less than or equal to 1 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest. Excitation: 488 nm; Emission: 520 nm; Laser: Blue Laser. Filtration: 0.2 µm post-manufacturing filtered.

Background/Target Information

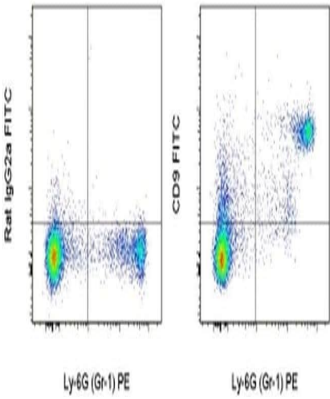
CD9 antigen is a glycoprotein expressed on the surface of developing B lymphocytes, platelets, monocytes, eosinophils, basophil, stimulated T lymphocytes and by neurons and glial cells in the peripheral nervous system. CD9 belongs to a family of membrane proteins termed tetraspanins which transverse the membrane four times. In pre B cells and platelets, CD9 antigen regulates cell activation and aggregation possibly through an association with the integrin CD41 / CD61 (GPIIb / GPIIIa). 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 functions in many cellular processes including differentiation, adhesion, and signal transduction, and expression plays a critical role in the suppression of cancer cell motility and metastasis. CD9 is also considered as metastasis suppressor in solid tumors.

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CD9 Antibody (11-0091-81) in Flow
Staining of BALB/c bone marrow cells with Anti-Mouse Ly-6G (Gr-1) PE (Product # 12-5931-82) and 1 µg of Rat IgG2a K Isotype Control FITC (Product # 11-4321-42) (left) or 1 µg of Anti-Mouse CD9 FITC (right). Cells in the large scatter population were used for analysis.

1 Flow Cytometry References

Species / Dilution	Summary
Mouse / Not Cited	11-0091 was used in Flow cytometry/Cell sorting to study how CD19 CAR immune pressure induces a B-precursor acute lymphoblastic leukaemia lineage switch.
	Nature communications (2016; 7:)
	"CD19 CAR immune pressure induces B-precursor acute lymphoblastic leukaemia lineage switch exposing inherent leukaemic plasticity." Author(s):Jacoby E,Nguyen SM,Fontaine TJ,Welp K,Gryder B,Qin H,Yang Y,Chien CD,Seif AE,Lei H,Song YK,Khan J, Lee DW,Mackall CL,Gardner RA,Jensen MC,Shern JF,Fry TJ PubMed Article URL: http://dx.doi.org/10.1038/ncomms12320

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