

# CD9 (C-4): sc-13118



The Power to Question

## BACKGROUND

CD9 is a type IV transmembrane glycoprotein with four transmembrane domains. CD9 on pre-B cells may play a role in cell-cell adhesion. In addition, CD9 may play a role in signal transduction mediated by interaction with low molecular weight GTP binding proteins. CD9 is expressed on early B cells, eosinophils, basophils and activated T cells and is a major component of the platelet cell surface. It is also expressed on most non-T acute lymphoblastic leukemia cells and on some acute myeloid and chronic lymphoid leukemias.

## CHROMOSOMAL LOCATION

Genetic locus: CD9 (human) mapping to 12p13.31; Cd9 (mouse) mapping to 6 F3.

## SOURCE

CD9 (C-4) is a mouse monoclonal antibody raised against amino acids 101-210 of CD9 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD9 (C-4) is available conjugated to agarose (sc-13118 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13118 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13118 PE), fluorescein (sc-13118 FITC), Alexa Fluor® 488 (sc-13118 AF488), Alexa Fluor® 546 (sc-13118 AF546), Alexa Fluor® 594 (sc-13118 AF594) or Alexa Fluor® 647 (sc-13118 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13118 AF680) or Alexa Fluor® 790 (sc-13118 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, CD9 (C-4) is available conjugated to Alexa Fluor® 405 (sc-13118 AF405), 100 µg/2 ml, for IF, IHC(P) and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

CD9 (C-4) is recommended for detection of CD9 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 µg per 1 x 10<sup>6</sup> cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD9 siRNA (h): sc-35032, CD9 siRNA (m): sc-37252, CD9 shRNA Plasmid (h): sc-35032-SH, CD9 shRNA Plasmid (m): sc-37252-SH, CD9 shRNA (h) Lentiviral Particles: sc-35032-V and CD9 shRNA (m) Lentiviral Particles: sc-37252-V.

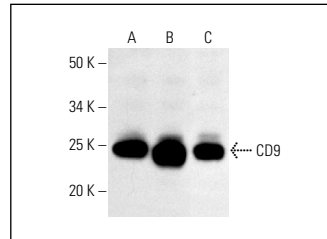
Molecular Weight of CD9: 24 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, ZR-75-1 cell lysate: sc-2241 or HeLa whole cell lysate: sc-2200.

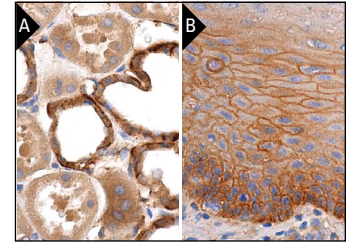
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



CD9 (C-4): sc-13118. Western blot analysis of CD9 expression in BT-20 (A), ZR75-1 (B) and HeLa (C) whole cell lysates.



CD9 (C-4): sc-13118. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing membrane and cytoplasmic staining of cells in tubules (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human oral mucosa tissue showing membrane staining of squamous epithelial cells (B).

## SELECT PRODUCT CITATIONS

- Pisitkun, T., et al. 2004. Identification and proteomic profiling of exosomes in human urine. *Proc. Natl. Acad. Sci. USA* 36: 13368-13373.
- Zeng, L., et al. 2013. Histone deacetylase 3 unconventional splicing mediates endothelial-to-mesenchymal transition through transforming growth factor β2. *J. Biol. Chem.* 288: 31853-31866.
- Galindo-Hernandez, O., et al. 2014. Extracellular vesicles from MDA-MB-231 breast cancer cells stimulated with linoleic acid promote an EMT-like process in MCF10A cells. *Prostaglandins Leukot. Essent. Fatty Acids* 91: 299-310.
- Tosar, J.P., et al. 2015. Assessment of small RNA sorting into different extracellular fractions revealed by high-throughput sequencing of breast cell lines. *Nucleic Acids Res.* 43: 5601-5616.
- Kharmate, G., et al. 2016. Epidermal growth factor receptor in prostate cancer derived exosomes. *PLoS ONE* 11: e0154967.
- Shi, Y., et al. 2017. Tetraspanin CD9 stabilizes gp130 by preventing its ubiquitin-dependent lysosomal degradation to promote STAT3 activation in glioma stem cells. *Cell Death Differ.* 24: 167-180.
- Wan, Y., et al. 2018. Aptamer-conjugated extracellular nanovesicles for targeted drug delivery. *Cancer Res.* 78: 798-808.
- McCann, J.V., et al. 2019. A miRNA signature in endothelial cell-derived extracellular vesicles in tumor-bearing mice. *Sci. Rep.* 9: 16743.
- Firoozi, S., et al. 2020. Mesenchymal stem cell-derived extracellular vesicles alone or in conjunction with a SDKP-conjugated self-assembling peptide improve a rat model of myocardial infarction. *Biochem. Biophys. Res. Commun.* 524: 903-909.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.