SANTA CRUZ BIOTECHNOLOGY, INC.

CD9 (C-4): sc-13118

SANTA CRUZ BIOTECHNOLOGY

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_1 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, 200 µg/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 10^6 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.

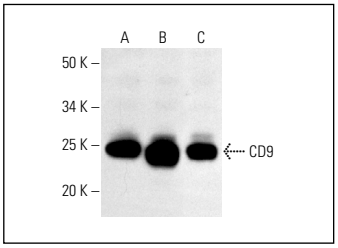
Molecular Weight of CD9: 24 kDa.

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

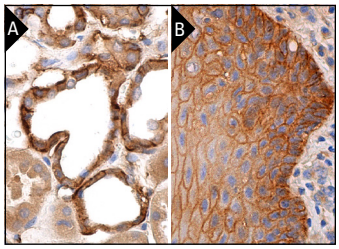
STORAGE

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

1. Pisitkun, T., et al. 2004. Identification and proteomic profiling of exosomes in human urine. Proc. Natl. Acad. Sci. USA 36: 13368-13373.
2. Yeh, Y.Y., et al. 2015. Characterization of CLL exosomes reveals a distinct microRNA signature and enhanced secretion by activation of BCR signaling. Blood 125: 3297-3305.
3. Kharmate, G., et al. 2016. Epidermal growth factor receptor in prostate cancer derived exosomes. PLoS ONE 11: e0154967.
4. 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.
5. Wan, Y., et al. 2018. Aptamer-conjugated extracellular nanovesicles for targeted drug delivery. Cancer Res. 78: 798-808.
6. McCann, J.V., et al. 2019. A miRNA signature in endothelial cell-derived extracellular vesicles in tumor-bearing mice. Sci. Rep. 9: 16743.
7. 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.
8. Albino, D., et al. 2021. Circulating extracellular vesicles release oncogenic miR-424 in experimental models and patients with aggressive prostate cancer. Commun. Biol. 4: 119.
9. Dong, P., et al. 2022. BMAL1 induces colorectal cancer metastasis by stimulating exosome secretion. Mol. Biol. Rep. 49: 373-384.
10. Hu, L., et al. 2023. Interaction network of extracellular vesicles building universal analysis via eye tears: iNEBULA. Sci. Adv. 9: eadg1137.

RESEARCH USE

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