SANTA CRUZ BIOTECHNOLOGY, INC.

CD9 (MEM-61): sc-51575

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.

REFERENCES

1. Ferrero, D., et al. 1991. CD9 antigen on acute non-lymphoid leukemia cells: preferential expression by promyelocytic (M3) subtype. Leuk. Res. 15: 457-461.
2. Lanza, F., et al. 1991. cDNA cloning and expression of platelet p24/CD9. Evidence for a new family of multiple membrane-spanning proteins. J. Biol. Chem. 266: 10638-10645.
3. Seehafer, J.G., et al. 1991. Evidence that the signal-initiating membrane protein CD9 is associated with small GTP-binding proteins. Biochem. Biophys. Res. Commun. 179: 401-406.
4. Masellis-Smith, A., et al. 1994. CD9-regulated adhesion. Anti-CD9 monoclonal antibody induce pre-B cell adhesion to bone marrow fibroblasts through *de novo* recognition of Fibronectin. J. Immunol. 152: 2768-2777.
5. Wright, M.D., et al. 1994. The ins and outs of the transmembrane 4 superfamily. Immunol. Today 15: 588-594.

CHROMOSOMAL LOCATION

Genetic locus: CD9 (human) mapping to 12p13.31.

SOURCE

CD9 (MEM-61) is a mouse monoclonal antibody raised against pre-B cell line NALM-6 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD9 (MEM-61) is recommended for detection of an epitope on second extracellular domain (EC2) of CD9 of human origin by Western Blotting (non-reducing) (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)] and flow cytometry (1 µg per 1 x 10^6 cells).

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

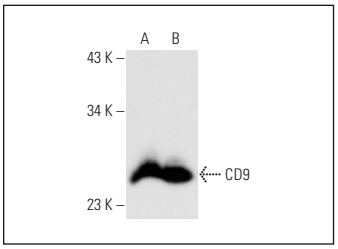
Molecular Weight of CD9: 24 kDa.

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

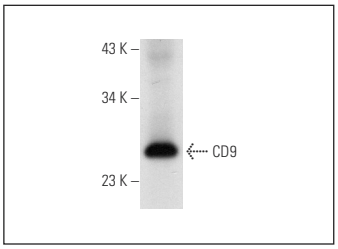
STORAGE

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

DATA



CD9 (MEM-61): sc-51575. Western blot analysis of CD9 expression in BT-20 (**A**) and ZR-75-1 (**B**) whole cell lysates under non-reducing conditions.



CD9 (MEM-61): sc-51575. Western blot analysis of CD9 expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

1. Ahmed, I.S., et al. 2010. Pgrmc1 (progesterone receptor membrane component 1) associates with epidermal growth factor receptor and regulates erlotinib sensitivity. J. Biol. Chem. 285: 24775-24782.
2. Riches, A., et al. 2015. Human urinary exosomes in bladder cancer patients: properties, concentrations and possible clinical application. Bladder 2: e19.
3. Jeong, H., et al. 2019. Size-based analysis of extracellular vesicles using sequential transfer of an evaporating droplet. Lab Chip 19: 3326-3336.
4. Han, C., et al. 2019. Mesenchymal stem cell engineered nanovesicles for accelerated skin wound closure. ACS Biomater. Sci. Eng. 5: 1534-1543.
5. Lu, W., et al. 2020. Tetraspanin CD9 interacts with α-secretase to enhance its oncogenic function in pancreatic cancer. Am. J. Transl. Res. 12: 5525-5537.
6. Han, C., et al. 2021. Single-vesicle imaging and co-localization analysis for tetraspanin profiling of individual extracellular vesicles. J. Extracell. Vesicles 10: e12047.
7. Kim, J., et al. 2021. Evaluation of micro-RNA in extracellular vesicles from blood of patients with prostate cancer. PLoS ONE 16: e0262017.
8. Cho, S., et al. 2021. Multifluorescence single extracellular vesicle analysis by time-sequential illumination and tracking. ACS Nano. E-published.

RESEARCH USE

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