SANTA CRUZ BIOTECHNOLOGY, INC.

CD109 (C-9): sc-271085

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CD109 is a glycosylphosphatidylinositol (GPI)-linked cell surface glycoprotein. It is a member of the α-macroglobulin/C3, C4, C5 family of thioester-containing proteins. CD109 is expressed by $CD34^+$ acute myeloid leukemia cell lines, activated T lymphoblasts, activated platelets, T cell lines, endothelial cells, lung and esophageal squamous cell carcinomas and testis. It has all the characteristics of a cancer-testis antigen. CD109 carries the platelet-specific Gov antigen system, which is involved in platelet transfusion refraction, neonatal alloimmune thrombocytopenia and posttransfusion purpura.

CHROMOSOMAL LOCATION

Genetic locus: CD109 (human) mapping to 6q13; Cd109 (mouse) mapping to 9 E1.

SOURCE

CD109 (C-9) is a mouse monoclonal antibody raised against amino acids 957-1041 mapping within an internal region of CD109 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.

CD109 (C-9) is available conjugated to agarose (sc-271085 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271085 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271085 PE), fluorescein (sc-271085 FITC), Alexa Fluor® 488 (sc-271085 AF488), Alexa Fluor® 546 (sc-271085 AF546), Alexa Fluor® 594 (sc-271085 AF594) or Alexa Fluor® 647 (sc-271085 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271085 AF680) or Alexa Fluor® 790 (sc-271085 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CD109 (C-9) is recommended for detection of CD109 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CD109 siRNA (h): sc-44950, CD109 siRNA (m): sc-44951, CD109 shRNA Plasmid (h): sc-44950-SH, CD109 shRNA Plasmid (m): sc-44951-SH, CD109 shRNA (h) Lentiviral Particles: sc-44950-V and CD109 shRNA (m) Lentiviral Particles: sc-44951-V.

Molecular Weight of CD109: 170 kDa.

Positive Controls: U-251-MG whole cell lysate: sc-364176, A549 cell lysate: sc-2413 or HeLa whole cell lysate: sc-2200.

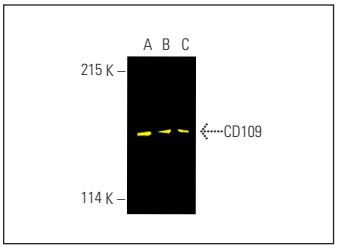
STORAGE

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

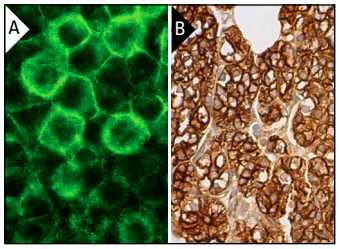
RESEARCH USE

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

DATA



CD109 (C-9) Alexa Fluor® 488: sc-271085 AF488. Direct fluorescent western blot analysis of CD109 expression in U-251-MG (**A**), A549 (**B**) and HeLa (**C**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214.



CD109 (C-9): sc-271085. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human parathyroid gland tissue showing membrane and cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Monticone, M., et al. 2012. Identification of a novel set of genes reflecting different *in vivo* invasive patterns of human GBM cells. BMC Cancer 12: 358.
2. Sakakura, H., et al. 2014. Detection of a soluble form of CD109 in serum of CD109 transgenic and tumor xenografted mice. PLoS ONE 9: e83385.
3. Zhang, J.M., et al. 2015. CD109 attenuates TGF-β1 signaling and enhances EGF signaling in SK-MG-1 human glioblastoma cells. Biochem. Biophys. Res. Commun. 459: 252-258.
4. Sakakura, H., et al. 2016. CD109 is a component of exosome secreted from cultured cells. Biochem. Biophys. Res. Commun. 469: 816-822.
5. Chuang, C.H., et al. 2017. Molecular definition of a metastatic lung cancer state reveals a targetable CD109-Janus kinase-Stat axis. Nat. Med. 23: 291-300.
6. Bojic, S., et al. 2018. CD200 expression marks a population of quiescent limbal epithelial stem cells with holoclone forming ability. Stem Cells 36: 1723-1735.
7. Minata, M., et al. 2019. Phenotypic plasticity of invasive edge glioma stem-like cells in response to ionizing radiation. Cell Rep. 26: 1893-1905.e7.
8. Strømme, O., et al. 2019. Myeloma-derived extracellular vesicles mediate HGF/c-Met signaling in osteoblast-like cells. Exp. Cell Res. 383: 111490.
9. Mo, X.T., et al. 2020. CD109 mediates tumorigenicity and cancer aggressiveness via regulation of EGFR and Stat3 signalling in cervical squamous cell carcinoma. Br. J. Cancer 123: 833-843.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.