

# CD109 (C-9): sc-271085

## BACKGROUND

CD109 is a glycosylphosphatidylinositol (GPI)-linked cell surface glycoprotein. It is a member of the  $\alpha$ -Macroglobulin/C3, C4, C5 family of thioester-containing proteins. CD109 is expressed by CD34<sup>+</sup> 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  $\mu$ g IgG<sub>1</sub> 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  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271085 HRP), 200  $\mu$ g/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  $\mu$ g/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  $\mu$ g/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  $\mu$ g per 100-500  $\mu$ g 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.

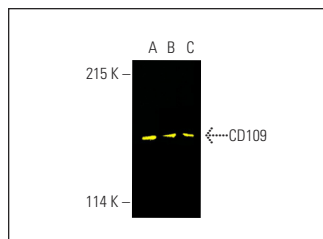
## STORAGE

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

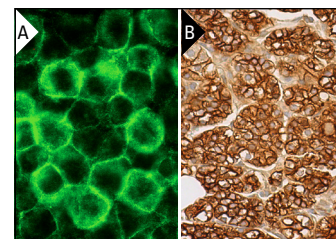
## RESEARCH USE

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

- 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.
- 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.
- 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.
- 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.
- 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.
- Osuka, S., et al. 2021. N-cadherin upregulation mediates adaptive radioresistance in glioblastoma. *J. Clin. Invest.* 131: e136098.
- Mehrabian, M., et al. 2022. Cardiac glycoside-mediated turnover of Na, K-ATPases as a rational approach to reducing cell surface levels of the cellular prion protein. *PLoS ONE* 17: e0270915.
- Solier, S., et al. 2023. A druggable copper-signalling pathway that drives inflammation. *Nature* 617: 386-394.
- Lee, M.J., et al. 2024. Senescence of endothelial cells increases susceptibility to Kaposi's sarcoma-associated herpesvirus infection via CD109-mediated viral entry. *J. Clin. Invest.* 135: e183561.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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