SANTA CRUZ BIOTECHNOLOGY, INC.

CD109 (H-7): sc-365780

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.

REFERENCES

1. Sasaki, R., et al. 1979. Terminal deoxy-nucleotidyl transferase activity and B cell markers in chronic myelogenous leukemia blast crisis. Acta Haematol. 62: 143-147.
2. Kelton, J.G., et al. 1990. $Gov^{a/b}$ alloantigen system on human platelets. Blood 75: 2172-2176.
3. Lin, M., et al. 2002. Cell surface antigen CD109 is a novel member of the α2 macroglobulin/C3, C4, C5 family of thioester-containing proteins. Blood 99: 1683-1691.
4. Schuh, A.C., et al. 2002. A Tyrosine 703 serine polymorphism of CD109 defines the Gov platelet alloantigens. Blood 99: 1692-1698.
5. Giesert, C., et al. 2003. Antibody W7C5 defines a CD109 epitope expressed on $CD34^+$ and $CD34^-$ hematopoietic and mesenchymal stem cell subsets. Ann. N.Y. Acad. Sci. 996: 227-230.
6. Solomon, K.R., et al. 2004. CD109 represents a novel branch of the α2 macroglobulin/complement gene family. Gene 327: 171-183.
7. Zhang, J.M., et al. 2005. CD109 expression in squamous cell carcinoma of the uterine cervix. Pathol. Int. 55: 165-169.

CHROMOSOMAL LOCATION

Genetic locus: CD109 (human) mapping to 6q13.

SOURCE

CD109 (H-7) is a mouse monoclonal antibody raised against amino acids 331-630 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.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

CD109 (H-7) is recommended for detection of CD109 of 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) 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 shRNA Plasmid (h): sc-44950-SH, and CD109 shRNA (h) Lentiviral Particles: sc-44950-V.

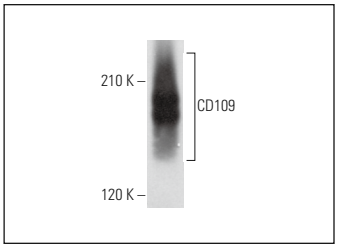
Molecular Weight of CD109: 170 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, PC-3 cell lysate: sc-2220 or human platelet extract: sc-363773.

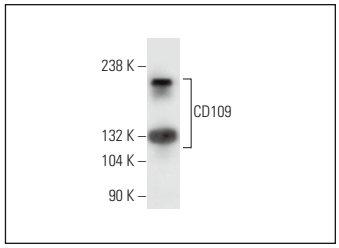
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CD109 (H-7): sc-365780. Western blot analysis of CD109 expression in PC-3 whole cell lysate.



CD109 (H-7): sc-365780. Western blot analysis of CD109 expression in human platelet extract.

SELECT PRODUCT CITATIONS

1. Emori, M., et al. 2013. High expression of CD109 antigen regulates the phenotype of cancer stem-like cells/cancer-initiating cells in the novel epithelioid sarcoma cell line ESX and is related to poor prognosis of soft tissue sarcoma. PLoS ONE 8: e84187.
2. Arias-Pinilla, G.A., et al. 2018. Development of novel monoclonal antibodies against CD109 overexpressed in human pancreatic cancer. Oncotarget 9: 19994-20007.

RESEARCH USE

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