

CD109 (W7C5): sc-73385



BACKGROUND

CD109 is a glycosylphosphatidylinositol (GPI)-linked cell surface glycoprotein. It is a member of the α_2 -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 refractoriness, neonatal alloimmune thrombocytopenia and posttransfusion purpura.

REFERENCES

1. Sasaki, R., Takaku, F., Sakamoto, S. and Kanoh, Y. 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., Smith, J.W., Horsewood, P., Humbert, J.R., Hayward, C.P. and Warkentin, T.E. 1990. Gov $^{a/b}$ alloantigen system on human platelets. *Blood* 75: 2172-2176.
3. Lin, M., Sutherland, D.R., Horsfall, W., Totty, N., Yeo, E., Nayar, R., Wu, X.F. and Schuh, A.C. 2002. Cell surface antigen CD109 is a novel member of the α_2 -Macroglobulin/C3, C4, C5 family of thioester-containing proteins. *Blood* 99: 1683-1691.
4. Schuh, A.C., Watkins, N.A., Nguyen, Q., Harmer, N.J., Lin, M., Prosper, J.Y., Campbell, K., Sutherland, D.R., Metcalfe, P., Horsfall, W. and Ouwehand, W.H. 2002. A tyrosine703serine polymorphism of CD109 defines the Gov platelet alloantigens. *Blood* 99: 1692-1698.
5. Giesert, C., Marxer, A., Sutherland, D.R., Schuh, A.C., Kanz, L. and Buhring, H.J. 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., Sharma, P., Chan, M., Morrison, P.T. and Finberg, R.W. 2004. CD109 represents a novel branch of the α_2 -Macroglobulin/complement gene family. *Gene* 327: 171-183.
7. Zhang, J.M., Hashimoto, M., Kawai, K., Murakumo, Y., Sato, T., Ichihara, M., Nakamura, S. and Takahashi, M. 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 (W7C5) is a mouse monoclonal antibody raised against WERI-RB-1 retinoblastoma cell line of human origin.

PRODUCT

Each vial contains 100 μ g IgG $_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

CD109 (W7C5) is recommended for detection of CD109 of human origin by flow cytometry (1 μ g per 1 x 10 6 cells).

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.

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.

PROTOCOLS

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