SANTA CRUZ BIOTECHNOLOGY, INC.

CD42d (CLB-SW16): sc-59053

BACKGROUND

In the early phase of primary hemostasis, platelets adhere to damaged blood vessel walls by binding via the CD42 complex, also designated platelet glycoprotein (GP) complex, to the von Willebrand factor (vWf) protein, which is exposed on the subendothelium. The CD42 complex contains four subunits, CD42b (GPIb α) and CD42c (GPIb β), which are linked by a disulfide bridge, and CD42a (GPIX) and CD42d (GPV), which are noncovalently linked to the complex. The CD42 complex is specifically expressed in platelets and megakaryocytes. Cleavage of CD42d by Thrombin produces a soluble fragment and a membrane associated fragment, which merits CD42d as a useful marker for platelet activation by thrombin. The gene encoding human CD42d maps to chromosome 3q29.

REFERENCES

1. Lanza, F., Morales, M., de La Salle, C., Cazenave, J.P., Clemetson, K.J., Shimomura, T. and Phillips, D.R. 1993. Cloning and characterization of the gene encoding the human platelet glycoprotein V. A member of the leucine-rich glycoprotein family cleaved during thrombin-induced platelet activation. J. Biol. Chem. 268: 20801-20807.
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3. Clemetson, K.J. and Clemetson, J.M. 1995. Platelet GPIb/V/IX complex. Structure, function, physiology and pathology. Semin. Thromb. Hemost. 21: 130-136.
4. Koskela, S., Kekomaki, R. and Partanen, J. 1998. Genetic polymorphism in human platelet glycoprotein GPIb/IX/V complex is enriched in GPV (CD42d). Tissue Antigens 52: 236-241.
5. Kahn, M.L., Diacovo, T.G., Bainton, D.F., Lanza, F., Trejo, J. and Coughlin, S.R. 1999. Glycoprotein V-deficient platelets have undiminished Thrombin responsiveness and do not exhibit a Bernard-Soulier phenotype. Blood 94: 4112-4121.
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7. Moog, S., Mangin, P., Lenain, N., Strassel, C., Ravanat, C., Schuhler, S., Freund, M., Santer, M., Kahn, M., Nieswandt, B., Gachet, C., Cazenave, J.P. and Lanza, F. 2001. Platelet glycoprotein V binds to collagen and participates in platelet adhesion and aggregation. Blood 98: 1038-1046.

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.

CHROMOSOMAL LOCATION

Genetic locus: GP5 (human) mapping to 3q29.

SOURCE

CD42d (CLB-SW16) is a mouse monoclonal antibody raised against platelets 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

CD42d (CLB-SW16) is recommended for detection of CD42d of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for CD42d siRNA (h): sc-61913, CD42d shRNA Plasmid (h): sc-61913-SH and CD42d shRNA (h) Lentiviral Particles: sc-61913-V.

Molecular Weight of CD42d: 82 kDa.

SELECT PRODUCT CITATIONS

1. Liang, X., Russell, S.R., Estelle, S., Jones, L.H., Cho, S., Kahn, M.L., Berndt, M.C., Bunting, S.T., Ware, J. and Li, R. 2013. Specific inhibition of ectodomain shedding of glycoprotein Ibα by targeting its juxtamembrane shedding cleavage site. J. Thromb. Haemost. 11: 2155-2162.

RESEARCH USE

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