SANTA CRUZ BIOTECHNOLOGY, INC.

CD42d (N-18): sc-26246

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 of four subunits, CD42b (GPIb alpha) and CD42c (GPIb beta), 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 69 kDa soluble fragment and a 20 kDa 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., et al. 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.
2. Clemetson, K.J., et al. 1995. Platelet GPIb-V-IX complex. Structure, function, physiology, and pathology. Semin. Thromb. Hemost. 21: 130-136.
3. Yagi, M., et al. 1995. Human platelet glycoproteins V and IX: mapping of two leucine-rich glycoprotein genes to chromosome 3 and analysis of structures. Biochemistry 34: 16132-16137.
4. Koskela, S., et al. 1998. Genetic polymorphism in human platelet glycoprotein GP Ib/IX/V complex is enriched in GP V (CD42d). Tissue Antigens 52: 236-241.
5. Kahn, M.L., et al. 1999. Glycoprotein V-deficient platelets have undiminished thrombin responsiveness and do not exhibit a Bernard-Soulier phenotype. Blood 94: 4112-4121.
6. Ravanat, C., et al. 2000. GPV is a marker of *in vivo* platelet activation—study in a rat thrombosis model. Thromb. Haemost. 83: 327-333.
7. Moog, S., et al. 2001. Platelet glycoprotein V binds to collagen and participates in platelet adhesion and aggregation. Blood 98: 1038-1046.

CHROMOSOMAL LOCATION

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

SOURCE

CD42d (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of CD42d of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-26246 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CD42d (N-18) is recommended for detection of CD42d of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.