

CD42b (PM6/40): sc-59051

BACKGROUND

CD42a is a single-chain membrane glycoprotein that forms a noncovalent complex with CD42b. CD42b, also known as glycoprotein Ib α (GPIb α) is a membrane glycoprotein that is composed of α and β chains. The CD42b β chain is also designated CD42 γ , and is expressed on platelets and megakaryocytes. CD42a and CD42b are also present on platelets and megakaryocytes, and the complex is a major component of the platelet surface. The complex acts as a receptor for von Willebrand's factor and as a von Willebrand's factor-dependent adhesion receptor.

REFERENCES

1. Lopez, J.A., et al. 1988. The α and β chains of human platelet glycoprotein Ib are both transmembrane proteins containing a leucine-rich amino acid sequence. *Proc. Natl. Acad. Sci. USA* 85: 2135-2139.
2. Roth, G.J. 1992. Platelets and blood vessels: the adhesion event. *Immunol. Today* 13: 100-105.
3. Hickey, M.J. and Roth, G.J. 1993. Characterization of the gene encoding human platelet glycoprotein IX. *J. Biol. Chem.* 268: 3438-3443.
4. Kelly, M.D., et al. 1994. Complementary DNA cloning of the alternatively expressed endothelial cell glycoprotein Ib β (GPIb β) and localization of the GPIb β gene to chromosome 22. *J. Clin. Invest.* 93: 2417-2424.
5. Yagi, M., et al. 1994. Structural characterization and chromosomal location of the gene encoding human platelet glycoprotein Ib β . *J. Biol. Chem.* 269: 17424-17427.
6. Lopez, J.A., et al. 1994. Glycoprotein (GP)Ib β is the critical subunit linking GPIb α and GPIX in the GPIb-IX complex. Analysis of partial complexes. *J. Biol. Chem.* 269: 23716-23721.
7. Kunishima, S., et al. 1994. Bernard-Soulier syndrome Kagoshima: Ser 444 \rightarrow stop mutation of glycoprotein (GP) Ib α resulting in circulating truncated GPIb α and surface expression of GPIb β and GPIX. *Blood* 84: 3356-3362.

CHROMOSOMAL LOCATION

Genetic locus: GP1BA (human) mapping to 17p13.2.

SOURCE

CD42b (PM6/40) is a mouse monoclonal antibody raised against plasma membranes of human origin.

PRODUCT

Each vial contains 200 μ g IgG γ 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.

APPLICATIONS

CD42b (PM6/40) is recommended for detection of CD42b of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for CD42b siRNA (h): sc-42789, CD42b shRNA Plasmid (h): sc-42789-SH and CD42b shRNA (h) Lentiviral Particles: sc-42789-V.

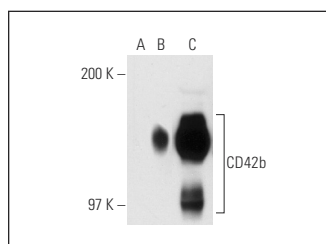
Molecular Weight of CD42b: 143 kDa.

Positive Controls: CD42b (h): 293T Lysate: sc-114145 or human platelet extract: sc-363773.

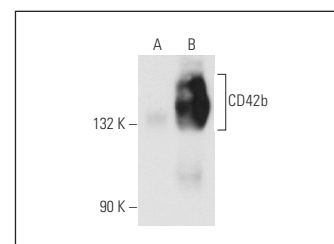
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



CD42b (PM6/40): sc-59051. Western blot analysis of CD42b expression in non-transfected: sc-117752 (A) and human CD42b transfected: sc-114145 (B) 293T whole cell lysates and human platelet extract (C).



CD42b (PM6/40): sc-59051. Western blot analysis of CD42b expression in non-transfected: sc-117752 (A) and human CD42b transfected: sc-174990 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Besancenot, R., et al. 2014. JAK2 and MPL protein levels determine TPO-induced megakaryocyte proliferation vs differentiation. *Blood* 124: 2104-2115.
2. Le Blanc, J., et al. 2020. Platelets selectively regulate the release of BDNF, but not that of its precursor protein, proBDNF. *Front. Immunol.* 11: 575607.
3. Fleury, S., et al. 2021. Tissue-specificity of antibodies raised against TrkB and p75^{NTR} receptors; implications for platelets as models of neurodegenerative diseases. *Front. Immunol.* 12: 606861.

RESEARCH USE

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