

Platelet IIb/IIIa complex (189/21-10): sc-53417

BACKGROUND

Clone 189/21-10 detects an epitope of the Fibrinogen receptor and is human platelet specific; it does not recognize monocytes, leucocytes, lymphocytes, erythrocytes, leukemic cell lines, fibroblast cell lines or rodent platelets. The Fibrinogen receptor on platelets is a member of the integrin family and consists of two subunit glycoproteins, Integrin $\alpha 2\beta$ (platelet glycoprotein IIb, antigen CD41) and Integrin $\beta 3$ (platelet glycoprotein IIIa, antigen CD61) in a 1:1 stoichiometric ratio known as glycoprotein complex IIb/IIIa. Glycoprotein complex IIb/IIIa also acts as a receptor for von Willebrand factor and Fibronectin. Integrins are heterodimeric integral membrane proteins composed of an α chain and a β chain. Alpha chain 2β undergoes posttranslational cleavage to yield disulfide-linked light and heavy chains that join with $\beta 3$ to form a Fibronectin receptor expressed in platelets that plays a crucial role in coagulation. Mutations that interfere with this role result in thrombasthenia.

REFERENCES

1. Parise, L.V. and Phillips, D.R. 1985. Platelet membrane glycoprotein IIb/IIIa complex incorporated into phospholipid vesicles. Preparation and morphology. *J. Biol. Chem.* 260: 1750-1756.
2. Bird, C., et al. 1986. Immunochemical characterization of a new platelet specific monoclonal antibody and its use to demonstrate the cytoskeletal association of the platelet glyco-protein IIb/IIIa complex. *Biosci. Rep.* 6: 323-333.
3. Bray, P.F., et al. 1986. Biogenesis of the platelet receptor for Fibrinogen: evidence for separate precursors for glycoproteins IIb and IIIa. *Proc. Natl. Acad. Sci. USA* 83: 1480-1484.
4. Pytela, R., et al. 1986. Platelet membrane glycoprotein IIb/IIIa: member of a family of Arg-Gly-Asp-specific adhesion receptors. *Science* 231: 1559-1562.
5. Prandini, M.H., et al. 1988. Isolation of the human platelet glycoprotein IIb gene and characterization of the 5' flanking region. *Biochem. Biophys. Res. Commun.* 156: 595-601.
6. Bray, P.F., et al. 1988. Physical linkage of the genes for platelet membrane glycoproteins IIb and IIIa. *Proc. Natl. Acad. Sci. USA* 85: 8683-8687.

CHROMOSOMAL LOCATION

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

SOURCE

Platelet IIb/IIIa complex (189/21-10) is a mouse monoclonal antibody raised against human platelets.

PRODUCT

Each vial contains 200 μ g IgG_{2a} 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

complex (189/21-10) is recommended for detection of Platelet IIb and Platelet IIIa 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

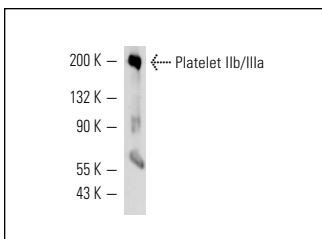
Molecular Weight of Platelet IIb/IIIa complex: 200 kDa.

Positive Controls: 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



Platelet IIb/IIIa complex (189/21-10): sc-53417. Western blot analysis of Platelet IIb/IIIa complex expression in human platelet whole cell lysate under non-reducing conditions.

SELECT PRODUCT CITATIONS

1. Muller, L., et al. 2014. Isolation of biologically-active exosomes from human plasma. *J. Immunol. Methods* 411: 55-65.
2. Cevik, O., et al. 2016. Platelets proteomic profiles of acute ischemic stroke patients. *PLoS ONE* 11: e0158287.
3. Hidi, L., et al. 2021. Cryopreservation moderates the thrombogenicity of arterial allografts during storage. *PLoS ONE* 16: e0255114.
4. Gara, E., et al. 2022. 3D culturing of human pluripotent stem cells-derived endothelial cells for vascular regeneration. *Theranostics* 12: 4684-4702.

RESEARCH USE

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

PROTOCOLS

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