

CD42d (G-11): sc-271662

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 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 mega-karyocytes. 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.

CHROMOSOMAL LOCATION

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

SOURCE

CD42d (G-11) is a mouse monoclonal antibody raised against amino acids 17-316 mapping within an extracellular domain of CD42d of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD42d (G-11) is available conjugated to agarose (sc-271662 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271662 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271662 PE), fluorescein (sc-271662 FITC), Alexa Fluor® 488 (sc-271662 AF488), Alexa Fluor® 546 (sc-271662 AF546), Alexa Fluor® 594 (sc-271662 AF594) or Alexa Fluor® 647 (sc-271662 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271662 AF680) or Alexa Fluor® 790 (sc-271662 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CD42d (G-11) is recommended for detection of CD42d of human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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.

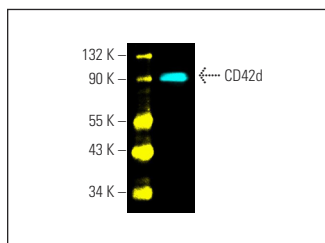
Molecular Weight of CD42d: 82 kDa.

Positive Controls: Daudi cell lysate: sc-2415 or human platelet extract: sc-363773.

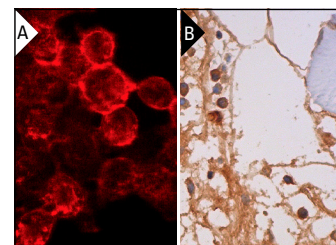
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CD42d (G-11) Alexa Fluor® 647: sc-271662 AF647. Direct fluorescent western blot analysis of CD42d expression in human platelet extract. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker™ MW Tag-Alexa Fluor® 488: sc-516790.



CD42d (G-11): sc-271662. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and membrane staining of hematopoietic cells (B).

SELECT PRODUCT CITATIONS

- Hu, C.M., et al. 2015. Nanoparticle biointerfacing by platelet membrane cloaking. *Nature* 526: 118-121.
- Salunkhe, V., et al. 2019. A comprehensive proteomics study on platelet concentrates: platelet proteome, storage time and Mirasol pathogen reduction technology. *Platelets* 30: 368-379.
- Beck, S., et al. 2023. Platelet glycoprotein V spatio-temporally controls fibrin formation. *Nat. Cardiovasc. Res.* 2: 368-382.

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.

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