

GPVI (H-139): sc-20149

BACKGROUND

CD32 (also designated FcγRII) is a low affinity receptor for the Fc fragment of aggregated IgG. CD32 is responsible for the clearance of immunocomplexes by macrophages and also plays an important role in the regulation of antibody production by B cells. A member of the immunoglobulin superfamily, glycoprotein VI (GPVI) is a collagen receptor that plays a critical role in collagen-induced platelet aggregation. Patients who are deficient in GPVI suffer from bleeding disorders, and GPVI may be involved with cardiovascular and cerebral vascular diseases. GPVI also binds the collagen related peptide (CRP) and convulxin (Cvx), a GPVI-specific ligand from snake venom. GPVI mediates its signal through CD32, which in response to Cvx, leads to tyrosine phosphorylation and activation of Syk and PLCγ2. The gene encoding human GPVI maps to chromosome 19q13.42 and produces three isoforms, full length GPVI-1 and two additional isoforms, GPVI-2 and GPVI-3.

REFERENCES

1. Barclay, A.N., et al. 1993. The Leukocyte Antigen Facts Book. London: Academic Press, 170-172.
2. Sondermann, P., et al. 1999. Characterization and crystallization of soluble human Fcγ receptor II (CD32) isoforms produced in insect cells. *Biochemistry* 38: 8469-8477.
3. Asazuma, N., et al. 2000. Interaction of linker for activation of T cells with multiple adapter proteins in platelets activated by the glycoprotein VI-selective ligand, convulxin. *J. Biol. Chem.* 275: 33427-33434.
4. Ezumi, Y., et al. 2000. Molecular cloning, genomic structure, chromosomal localization, and alternative splice forms of the platelet collagen receptor glycoprotein VI. *Biochem. Biophys. Res. Commun.* 277: 27-36.
5. Jandrot-Perrus, M., et al. 2000. Cloning, characterization, and functional studies of human and mouse glycoprotein VI: a platelet-specific collagen receptor from the immunoglobulin superfamily. *Blood* 96: 1798-1807.

CHROMOSOMAL LOCATION

Genetic locus: GP6 (human) mapping to 19q13.42.

SOURCE

GPVI (H-139) is a rabbit polyclonal antibody raised against amino acids 201-339 of GPVI 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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

APPLICATIONS

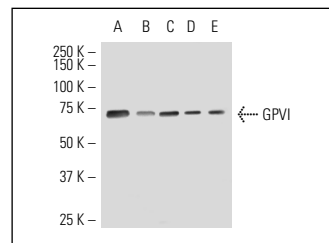
GPVI (H-139) is recommended for detection of GPVI-1, GPVI-2 and GPVI-3 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 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 GPVI siRNA (h): sc-43813, GPVI shRNA Plasmid (h): sc-43813-SH and GPVI shRNA (h) Lentiviral Particles: sc-43813-V.

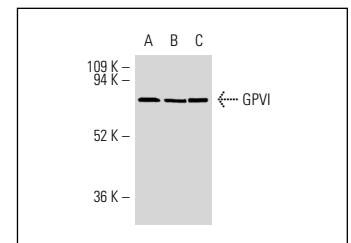
Molecular Weight of GPVI: 70 kDa.

Positive Controls: MEG-01 cell lysate: sc-2283, K-562 whole cell lysate: sc-2203 or Jurkat whole cell lysate: sc-2204.

DATA



GPVI (H-139): sc-20149. Western blot analysis of GPVI expression in MEG-01 (A), SK-N-SH (B), SJRH30 (C), IMR-32 (D) and SH-SY5Y (E) whole cell lysates.



GPVI (H-139): sc-20149. Western blot analysis of GPVI expression in MEG-01 (A), Jurkat (B) and K-562 (C) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, W.J. 2007. Purification and functional characterization of AAV1, a novel P-III metalloproteinase, from Formosan *Agkistrodon acutus* venom. *Biochimie* 89: 105-115.
2. Ortiz, L.A., et al. 2007. Interleukin 1 receptor antagonist mediates the anti-inflammatory and antifibrotic effect of mesenchymal stem cells during lung injury. *Proc. Natl. Acad. Sci. USA* 104: 11002-11007.
3. Zhao, X.M., et al. 2008. The influence of the pulsatility of the blood flow on the extent of platelet adhesion. *Thromb. Res.* 121: 821-825.
4. Hermans, C., et al. 2009. A compound heterozygous mutation in glycoprotein VI in a patient with a bleeding disorder. *J. Thromb. Haemost.* 7: 1356-1363.
5. Kawaguchi, T., et al. 2010. The human megakaryocytic cell line UT-7/TPO expresses functional platelet agonist signals mediated through GPVI and thromboxane receptor. *Cell Biol. Int.* 34: 943-949.


 MONOS
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