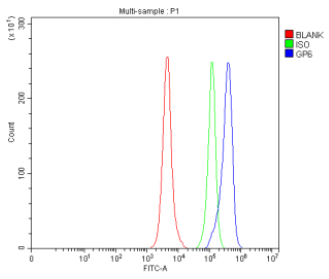
GP6 Antibody / Glycoprotein VI (FY12661)

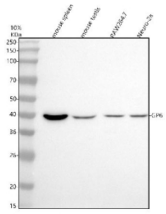
Catalog No.	Formulation	Size
FY12661	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Mouse
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P0C191
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This GP6 antibody is available for research use only.



Flow Cytometry analysis of RAW264.7 cells using anti-GP6 antibody. Overlay histogram showing RAW264.7 cells stained with (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-GP6 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



Western blot analysis of GP6 using anti-GP6 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: mouse spleen tissue lysates, Lane 2: mouse testis tissue lysates, Lane 3: mouse RAW264.7 whole cell lysates, Lane 4: mouse Neuro-2a whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-GP6 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. Western blot analysis of GP6 using anti-GP6 antibody. A major band is observed at ~39-40 kDa, consistent with glycosylated GP6 migrating above the ~35 kDa calculated mass.

Description

GP6 antibody detects Glycoprotein VI, a platelet membrane receptor that plays a key role in platelet activation and thrombus formation. GP6 functions as a receptor for collagen and signals through the immunoreceptor tyrosine-based activation motif (ITAM) pathway to promote platelet adhesion and aggregation following vascular injury. The GP6 antibody is widely used in hematology, cardiovascular, and hemostasis research to study platelet activation, coagulation, and thrombotic disease mechanisms.

GP6 is encoded by the GP6 gene located on human chromosome 19q13.42. The protein is approximately 339 amino acids long and belongs to the immunoglobulin superfamily, featuring two extracellular Ig-like domains, a transmembrane region, and a short cytoplasmic tail that associates with the Fc receptor gamma chain (FcRgamma). This association is necessary for downstream signaling via the SYK tyrosine kinase and phospholipase C gamma 2 cascade.

The GP6 antibody detects a 58 kilodalton band by western blot and shows strong membrane localization under flow cytometry and immunofluorescence microscopy. GP6 mediates platelet adhesion to exposed collagen fibers during vascular injury, triggering calcium mobilization, granule secretion, and integrin activation. This sequence of events leads to platelet aggregation and stabilization of the forming clot.

Genetic deficiencies or polymorphisms in GP6 result in defective platelet-collagen interactions and mild bleeding disorders, while overactivation contributes to thrombotic conditions such as myocardial infarction and stroke. GP6 has also been identified as a therapeutic target for antiplatelet therapy because selective inhibition can prevent thrombosis without affecting normal hemostasis. Additionally, GP6 participates in inflammatory responses by modulating platelet-leukocyte interactions.

Because of its central role in platelet physiology and vascular repair, GP6 provides an essential model for studying thrombosis, hemostasis, and inflammation. NSJ Bioreagents provides a validated GP6 antibody optimized for its applications, supporting research into platelet function, coagulation, and cardiovascular health.

Application Notes

Optimal dilution of the GP6 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of mouse GP6 was used as the immunogen for the GP6 antibody.

Storage

After reconstitution, the GP6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.