

GPVI Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Glycoprotein 6;GP6;glycoprotein VI (platelet);GPVI;GPIV;MGC138168;platelet glycoprotein VI; GPVIplatelet collagen receptor
Protein Construction:	Gln22-Lys265
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	B2RR15
Molecular Weight:	40-60 KDa (reducing condition)
AA Sequence:	Gln22-Lys265

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Glycoprotein VI (GPVI) is a 63 kDa platelet/megakaryocyte-specific type I transmembrane glycoprotein of the immunoglobulin superfamily that is an important collagen receptor and initiator of platelet activation, aggregation and thrombin generation. GPVI is also a secondary receptor required for platelet spreading on laminin. GPVI associates with the Fc receptor gamma -chain via charged aa in the TM domains of GPVI (arginine) and the FcR gamma (aspartic acid). Collagen binding by the GPVI Ig-like domains initiates signaling through the

FcR gamma ITAM sequence. Dimerization of GPVI (2:2 with FcR gamma) and N-glycosylation greatly enhances collagen binding. Type I and III collagens are strong thrombus-forming components in the vascular subendothelium and atherosclerotic plaques. GPVI initiates binding to fibrillar collagens under flow conditions, then activates integrin alpha 2 beta 1 which binds collagen more tightly. GPVI deficiencies cause only a mild bleeding tendency, probably because integrin alpha 2 beta 1 is able to minimally initiate collagen binding. Normal human GPVI concentration can vary widely and affect maximum thrombin generation. Engagement of GPVI by collagens or other agonists, including autoantibodies, causes calmodulin-regulated metalloproteinase cleavage of the 57 kDa ECD and depletes surface GPVI.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481