Recombinant Protein Technical Manual

Recombinant Human GP1BB/CD42c Protein (His Tag)

RPES1088

Product Data:

Product SKU: RPES1088

Size: 20µg

Species: Human

Expression host: HEK293 Cells

Uniprot: NP_000398.1

Protein Information:

Molecular Mass: 14.3 kDa

AP Molecular Mass: 20 kDa

Tag: C-His

Bio-activity:

Purity: > 97 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.

Shipping: This product is provided as lyophilized powder which is shipped with ice packs.

Formulation: Lyophilized from sterile PBS, pH 7.4

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: BDPLT1;BS;CD42C;GPIBB

Immunogen Information:

Sequence: Met 1-Cys 147

Background:

Platelet glycoprotein Ib (GPIb) complex is best known as a major platelet receptor for von Willebrand factor essential for platelet adhesion under high shear conditions found in arteries and in thrombosis. The GPIb complex is composed of GPIb alpha (Platelet glycoprotein Ib alpha chain) covalently attached to GPIb beta (Platelet glycoprotein Ib beta chain) and noncovalently complexed with GPIX and GPV. GPIb-beta, also known as GP1BB, CD42b-beta and CD42c, is single-pass type I membrane protein expressed in heart and brain, which is a critical component of the von Willebrand factor (vWF) receptor. The cysteine knot region of GPIb beta in the N terminus is critical for the conformation of GPIb beta that interacts with GPIX. The precursor of GP1BB is synthesized from a 1.0 kb mRNA expressed in plateletes and megakaryocytes. GPIb is a heterodimeric transmembrane protein consisting of a disulfide-linked 140 kD alpha chain and 22 kD beta chain. GPIb alpha chain provides the vWF binding site, and GPIb beta chain contributes to surface expression of the receptor and participates in transmembrane signaling through phosphorylation of its intracellular domain. GP1BB is part of the GPIb-V-IX system that constitutes the receptor for von Willebrand factor (vWF), and mediates platelet adhesion in the arterial circulation. Defects in GP1BB are a cause of Bernard-Soulier syndrome (BSS), also known as giant platelet disease (GPD). BSS patients have unusually large platelets and have a clinical bleeding tendency.