

Division of Laboratory Medicine

Immunology

Platelet Glycoprotein Expression

General information

Platelet glycoprotein expression is useful in the diagnosis of Glanzmann's thrombasthenia and Bernard-Soulier syndrome. These hereditary platelet disorders are characterised by selective deficiencies of platelet membrane glycoproteins.

Specimen transport: At room temperature

Repeat frequency: At significant change of clinical symptoms

Special precautions: The assay should be carried out on blood that is < 24 hours old. Samples can be stored at 4°C prior to analysis. Blood should be taken in to sodium citrate anticoagulant.

Laboratory information

Normal range: >90% positive platelets

Volume and sample type: 5ml citrate blood

Method: Flow cytometric analysis of CD41, CD42b & CD61

Turnaround time (calendar days from sample receipt to authorised result): Median – 2

Participation in EQA Scheme: No formal scheme available. We perform a clinical review of abnormal results against other laboratory data and clinical information to assure results fit with the clinical diagnosis.

Clinical information

Indications for the test: Prolonged bleeding in infancy, haemorrhage, family history

Factors affecting the test: This assay is not recommended for patients with thrombocytopenia (<100 x 10⁹/L)

Interpretation: In Bernard-Soulier syndrome GPIb/IX/V (CD42b) is absent or dysfunctional. In Glanzmann thrombasthenia GPIIb/IIIa (CD41/CD61) is absent or dysfunctional. A mild decrease in the expression suggest a variant or heterozygous state.

ICE reference: Platelet glycoproteins

(Last updated March 2021)