abcam

Product datasheet

Anti-Integrin beta 3 antibody [25E11] - BSA and Azide free ab212511

Overview

Product name	Anti-Integrin beta 3 antibody [25E11] - BSA and Azide free
Description	Mouse monoclonal [25E11] to Integrin beta 3 - BSA and Azide free
Host species	Mouse
Specificity	ab212511 reacts with human integrin beta3 (GPIIIa, vitronectin receptor beta chain). The protein detectable is a complex of CD41 and CD61. The apparent molecular weight of the integrin beta3 by SDS-PAGE is 105kDa reduced and 90kDa unreduced. Ligands are fibronectin, fibrinogen, von Willebrand factor, vitronectin and thrombospondin. Residues 237-248 of integrin beta3 or CD61 are critical in adhesive protein binding.
Tested applications	**Suitable for:** ICC/IF, Flow Cyt, Inhibition Assay
Species reactivity	**Reacts with:** Human
Immunogen	Tissue, cells or virus corresponding to Human Integrin beta 3. Normal blood mononuclear cells activated by mixed lymphocyte reaction Database link: **P05106**
Positive control	U937, KG1a, HEL cells, and Human platelets in lymph nodes or tonsils.
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Constituent: 100% PBS
Carrier free	Yes

Purity	Protein A/G purified
Purification notes	ab212511 was purified from Bioreactor Concentrates.
Clonality	Monoclonal
Clone number	25E11
Isotype	IgM
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab212511 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration.
Inhibition Assay		Use at an assay dependent concentration. Inhibits platelet aggregation.

Target

Function	Integrin alpha-V/beta-3 is a receptor for cytotactin, fibronectin, laminin, matrix metalloproteinase-2, osteopontin, osteomodulin, prothrombin, thrombospondin, vitronectin and von Willebrand factor. Integrin alpha-IIb/beta-3 is a receptor for fibronectin, fibrinogen, plasminogen, prothrombin, thrombospondin and vitronectin. Integrins alpha-IIb/beta-3 and alpha-V/beta-3 recognize the sequence R-G-D in a wide array of ligands. Integrin alpha-IIb/beta-3 recognizes the sequence H-H-L-G-G-G-A-K-Q-A-G-D-V in fibrinogen gamma chain. Following activation integrin alpha-IIb/beta-3 brings about platelet/platelet interaction through binding of soluble fibrinogen. This step leads to rapid platelet aggregation which physically plugs ruptured endothelial surface. In case of HIV-1 infection, the interaction with extracellular viral Tat protein seems to enhance angiogenesis in Kaposi's sarcoma lesions.
Tissue specificity	Isoform beta-3A and isoform beta-3C are widely expressed. Isoform beta-3A is specifically expressed in osteoblast cells; isoform beta-3C is specifically expressed in prostate and testis.
Involvement in disease	Defects in ITGB3 are a cause of Glanzmann thrombasthenia (GT) [MIM:273800]; also known as thrombasthenia of Glanzmann and Naegeli. GT is the most common inherited disease of platelets. It is an autosomal recessive disorder characterized by mucocutaneous bleeding of mild-to-moderate severity and the inability of this integrin to recognize macromolecular or synthetic peptide ligands. GT has been classified clinically into types I and II. In type I, platelets show absence of the glycoprotein IIb/beta-3 complexes at their surface and lack fibrinogen and clot retraction capability. In type II, the platelets express the glycoprotein IIb/beta-3 complex at reduced levels (5-20% controls), have detectable amounts of fibrinogen, and have low or moderate clot retraction capability. The platelets of GT 'variants' have normal or near normal (60-100%) expression of dysfunctional receptors.
Sequence similarities	Belongs to the integrin beta chain family. Contains 1 VWFA domain.

Post-translational modifications	Phosphorylated on tyrosine residues in response to thrombin-induced platelet aggregation. Probably involved in outside-in signaling. A peptide (AA 740-762) is capable of binding GRB2 only when both Tyr-773 and Tyr-785 are phosphorylated. Phosphorylation of Thr-779 inhibits SHC binding.
Cellular localization	Membrane.

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