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Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Anti-HPA-1a [CAMTRAN007 (B2G1)] Standard Size Ab04041-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

This is a reformatted human IgG1 Fc Silent Fc Silent™ antibody, based on the original human scFv format, created for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Human IgG1, Fc Silent™, Lambda
Clone Number: CAMTRAN007 (B2G1)
Alternative Name(s) of Target: Leu33 CD61; Platelet membrane glycoprotein IIIa leucine-33; GPIIIa Leu 33
UniProt Accession Number of Target Protein:
Published Application(s): activation, Blocking, inhibition, MAIPA, PIFT, Sensitization, ELISA, IF
Published Species Reactivity: Human
Immunogen: The original antibody was generated by utilizing anti-self scFv phage display library techniques.
Specificity: This antibody is specific for the leucine 33 (not the proline 33) form of human GPIIIa.
Application Notes: The original format of this antibody (human scFv) was in ELISA screening to test its binding to antigen-coated plates, immunofluorescence (IF) analysis on genotyped platelets to assess binding, and inhibition assays to evaluate its ability to block the binding of human IgG GPIIIa leu 33-specific polyclonal alloantibodies. It showed specific binding to GPIIb/IIIa leu 33 homozygous platelets compared to GPIIb/IIIa pro 33 homozygous platelets, as demonstrated by IF staining and fluorescence-activated cell sorter (FACS) analysis. The purified scFv fragments were able to inhibit the binding of polyclonal GPIIIa leu 33-specific IgG alloantibodies from plasma, resulting in a significant reduction in binding in a Monoclonal Antibody-Specific Immobilization of Platelet Antigen (MAIPA) assay (Griffin & Ouwehand, 1995; PMID: 8541531). A human recombinant IgG1 (termed CAMTRAN007 (and later B2G1)) was created from the original scFv version of the antibody and used in platelet immunofluorescence test (PIFT) and to develop an ELISA assay for HPA-1a typing (Garner et al., 2000; PMID: 10691879). B2G1 was used to sensitize platelets and measure platelet binding IgG; the antibody was incubated with platelet-rich plasma (PRP) or washed platelets to sensitize them, and the sensitized platelets (P-IgG) were then used in functional assays and experiments to measure platelet activation and expression of P-selectin (Turner & Hadley, 2003; PMID:

12752104). Clone B2G1 was mutated (creating B2G1 Δnab and B2G1 Δnac antibodies), and all forms were used in various assays to study their effects on platelet activation, tyrosine phosphorylation, protein kinase C (PKC) activation, platelet aggregation, *in vitro* bleeding time (IVBT), platelet adhesion, and cell adhesion to fibrinogen. B2G1 achieved modest inhibition (20%) of binding to fibrinogen in a whole blood perfusion assay; ADP-induced aggregation was reduced by 50%; in HPA-1a1a platelets, both wildtype and mutated HPA-1a antibodies (including B2G1) caused 100% inhibition of whole blood perfusion over collagen, platelet aggregation to ADP, and IVBT responses to collagen/ADP and collagen/epinephrine; it inhibited ADP-induced aggregation in HPA-1a1a platelets, with greater inhibition at higher concentrations; it significantly prolonged closure times (CTs) in whole blood IVBT assays with HPA-1a1a platelets, with greater inhibition at higher concentrations; it had minimal or no effect on CTs with HPA-1a1b and HPA-1b1b samples; it inhibited platelet adhesion to fibrinogen under low shear rate in HPA-1a1a platelets but showed minimal inhibition in HPA-1a1b and HPA-1b1b samples; and it completely abolished αVβ3-Leu33-mediated cell spreading and attachment (Joutsi-Korhonen et al., 2004; PMID: 15045136).

Antibody First Published in: Griffin & Ouwehand A human monoclonal antibody specific for the leucine-33 ($P1^{A1}$, HPA-1a) form of platelet glycoprotein IIIa from a V gene phage display library Blood. 1995 Dec 15;86(12):4430-6. PMID:8541531

Note on publication: The original publication describes the generation of human monoclonal antibody fragments specific for the leucine 33 form of platelet glycoprotein IIIa, which can inhibit the binding of polyclonal human IgG alloantibodies to this form, offering potential diagnostic and therapeutic applications for severe fetal/neonatal alloimmune thrombocytopenia (FNAIT).

Product Form

Size: 100 µg Purified antibody.
Purification: Protein A affinity purified
Supplied In: PBS with 0.02% Proclin 300.
Storage Recommendation: Store at 4ºC for up to 3 months. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.