

Analyte Specific Reagent.

Analytical and performance characteristics are not established.

SPECIFICITY

The CD41 antigen (platelet GPIIb; α IIb integrin) is a glycoprotein composed of 2 chains, GPIIb α (120 kDa) and GPIIb β (23 kDa), linked by one disulfide bond (1). CD41 is always non-covalently associated with CD61 (platelet GPIIIa; β 3 integrin), to form the GPIIb-IIIa (CD41 / CD61) complex. The structure and the role of the complex CD41 / CD61 in hemostasis is reviewed in Ref. 2.

CD41 is expressed by platelets, megakaryocytes and by a small subset of CD34⁺ cells, suggesting that CD41 / CD61 is the earliest marker of the megakaryocytic lineage (3).

The SZ22 monoclonal antibody reacts with the α chain of CD41 (4, 5). It has been assigned to the CD41 cluster of differentiation at the 5th International Workshop on Human Leucocyte Differentiation Antigens in Boston, U.S.A., in 1993 (WS Code: P087, Section P) (6).

REAGENT

IOTest CD41-FITC Conjugated Antibody
PN IM1756U – 2 mL Liquid – 20 µL / test*.

Clone	SZ22
Isotype	IgG1, mouse
Immunogen	Washed human platelets
Hybridoma	X63 Ag.8653 x Balb/c
Source	Ascites fluid
Purification	Ion exchange or affinity chromatography
Conjugation	FITC (Fluorescein isothiocyanate) is conjugated at 15 – 25 moles of FITC per mole of Ig.
Fluorescence	FITC (Green) Excites at 468 – 509 nm Emits at 504 – 541 nm

REAGENT CONTENTS

This reagent is provided in phosphate-buffered saline, with 0.1% sodium azide (NaN₃) as preservative, and 2.0 mg / mL bovine serum albumin (BSA).

STATEMENT OF WARNINGS

1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide

compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.

2. Do not use antibody beyond the expiration date on the label.
3. Samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.
4. Never pipet by mouth and avoid contact of samples with skin and mucous membranes
5. Minimize exposure of reagent to light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.

STORAGE CONDITIONS AND STABILITY

This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze. Minimize exposure to light.

EVIDENCE OF DETERIORATION

Any change in the physical appearance of this FITC-labeled reagent (clear, colorless to yellowish-green liquid) or any major variation in values obtained for control samples may indicate deterioration and the reagent should not be used.

REAGENT PREPARATION

No preparation is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SELECTED RESEARCH REFERENCES

1. Newman, P.J., "Platelet GPIIb-IIIa: molecular variations and alloantigens", 1991, *Thromb. Haemostas.*, 1, 66, 111-118.
2. Naik, U.P., Parise, L.V., "Structure and function of platelet α IIb β 3", *Curr. Opin. Hematol.*, 4, 317-322.
3. Dercksen, W.M., Weimar, I.S., Richel, D.J., Breton-Gorius, J., Vainchenker, W., Slaper-Cortenbach, I.C.M., Pinedo, H.M., von dem Borne, Gerritsen, W.R., van der Schoot, C.E., "The value of flow cytometric analysis of platelet

glycoprotein expression on CD34⁺ cells measured under conditions that prevent P-Selectin-mediated binding of platelets", 1995, *Blood*, 10, 3771-3782.

4. Ruan, C., Du, X., Wan, H., Hu, X., Xi, X., Li, P., "Characterization of the fibrinogen binding sites using monoclonal antibodies to human platelet membrane glycoproteins IIb/IIIa", 1987, *Thromb. Haemostas.*, 1, 58, 243 (abstract)
5. Chong, B.H., Du, X., Berndt, C., Horn, S., Chesterman, C.N., "Characterization of the binding domains on platelet glycoproteins Ib-IX and IIb/IIIa complexes for the quinine / quinine-dependent antibodies", 1991, *Blood*, 10, 77, 2190-2199
6. Honda, S., Felding-Habermann, B., Loftus, J., Annis, D., Kunicki, T.J., "CD41 / CD61 cluster workshop report: localization of epitopes on integrins α IIb β 3 (CD41 / CD61) and α v β 3 (CD51 / CD61)", 1995, *Leucocyte Typing V, White Cell Differentiation Antigens*. Schlossman, S.F., et al., Eds., Oxford University Press, 1293-1305.

PRODUCT AVAILABILITY

IOTest CD41-FITC Conjugated Antibody
PN IM1756U – 2 mL Liquid – 20 µL / test*.

For additional information in the USA, call 800-526-7694.

Outside the USA, contact your local Beckman Coulter representative.

www.beckmancoulter.com

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(*) : 20 µL is the quantity of product sufficient to stain

5 x 10⁵ cells in a standard immunofluorescence assay

