



DATA SHEET

Product: CD42b APC

Cat. Ref: 42bA-100T

Reagent provided: 100 test (20µl/test)

Description: Monoclonal Mouse Anti-Human CD42b APC is recommended for use in flow cytometry for identification of platelets and megakaryocytes. The conjugate is provided in liquid form in buffer containing 1% bovine serum albumin (BSA) (Lote: 113K1364 / SIGMA) and 0,09% NaN₃, pH 7.2.

HLDA: 4th International Workshop on Human Leucocyte Differentiation, WS Code 40

Clone: HIP1

Isotype: IgG1

Fluorochrome: Allophycocyanin (*Europa Bioproducts, Ely, Cambridge-Prozyme*)

Reactivity: Reacts with a 135kd two chain membrane glycoprotein, GpIb, that forms a non covalent complex with GPIX (CD42a) found on platelets and megakaryocytes. Clone HIP1 antibody inhibits the ristocetin-dependent binding of von Willebrand Factor (vWF) to platelets, ristocetin-induced platelet agglutination and partially inhibits collagen induced aggregation. The GPIb/IX complex serves as the vWF surface receptor involved in the adhesion of platelets to the subendothelium of damaged vascular walls.

Specificity: The antibody is directed against the CD42b antigen, platelet glycoprotein gp1bA, that serves as a receptor for Von Willebrand factor (vWF) and as a high affinity thrombin receptor. AK2 immunoblots a band of 130kDa on SDS gels of platelet lysates and gives surface immunofluorescence with fixed or unfixed platelets. The antigen is absent in very low levels on platelets with the Bernard-Soulier syndrome.

Storage: Store in the dark at 2-8 °C. Do not use after expiration date stamped on vial. If unexpected staining is observed which cannot be explained by variations in laboratory procedures and a problem with the product is suspected, contact our Technical Services.

Application: It is recommended for use in flow cytometry. This reagent is effective for direct immunofluorescence staining of human tissue for flow cytometric analysis using 20 µl/10⁶ cells

Precautions:

1. The device is not intended for clinical use including diagnosis, prognosis, and monitoring of a disease state, and it must not be used in conjunction with patient records or treatment.
2. This product contains sodium azide (NaN₃), a chemical highly toxic in pure form. At product concentrations, though not classified as hazardous, sodium azide may react with lead and copper plumbing to form highly explosive build-ups of metal azides. Upon disposal, flush with large volumes of water to prevent metal azide build-up in plumbing.
3. As with any product derived from biological sources, proper handling procedures should be used.

Preparation:

1. Centrifuge tube of freshly drawn EDTA blood (600rpm or 75xg, 20')
2. Remove platelets (top layer) and wash twice over in PBS and resuspend in PBS.
3. Add 20 µL of CD42b APC and mix gently with a vortex mixer. The 20 µL is a guideline only; the optimal volume should be determined by the individual laboratory.
4. The recommended negative control is a non-reactive PE-conjugated antibody of the same isotype. (Code No. ISOCONTAPCIGG1).
5. Incubate in the dark at room temperature at 4 °C for 30 minutes or at room temperature (20-25 °C) for 15 minutes.
6. Analyse on a flow cytometer.

References:

1. Knapp W, Dorken B, et al, ed. *Leucocyte Typing IV*. New York: Oxford University Press; 1989.(Clone-specific) Schlossman S, Boumell L, et al, ed. *Leucocyte Typing V*. New York: Oxford University Press; 1995.(Biology)
2. Ryo Takahashi, Nariko Sekine, and Toshihiko Nakatake. Influence of Monoclonal Antiplatelet Glycoprotein Antibodies on In Vitro Human Megakaryocyte Colony Formation and Proplatelet Formation. *Blood*, Vol. 93 No. 6 (March 15), 1999: pp. 1951-1958
3. Philip E. Greilich, Chad F. Brouse, Joseph Beckham, Michael E. Jessen, Erika J. Martin and Marcus E. Carr. Reductions in platelet contractile force correlate with duration of cardiopulmonary bypass and blood loss in patients undergoing cardiac surgery. *Thrombosis Research* Volume 105, Issue 6, 15 March 2002, Pages 523-529
4. Lothar de Rossi, Martina Wessiepe, Wolfgang Buhre, Ralf Kuhlen, Gabriele Hutschenreuter and Rolf Rossaint. Effect of propofol on adhesion of activated platelets to leukocytes in human whole blood. *Intensive Care Medicine*. Volume 29, Number 7 / July, 2003 pag. 1157-1163