

**Monoclonal
Antibodies
Detecting
Human
Antigens**



Anti-P-glycoprotein (P-gp)

PE*

Catalog No. 340555

50 Tests

DESCRIPTION

Specificity

Anti-P-glycoprotein (P-gp) recognizes a 170-kdalton (kDa) protein from multidrug resistant (MDR) cells.¹

Antigen Distribution

P-glycoprotein is a transmembrane protein that acts as an ATP-dependent efflux pump for a large variety of drugs.^{1,2} This efflux activity has been suggested to lead to resistance to the drugs used in chemotherapy.^{3,4} P-glycoprotein is present in many normal cell types including secretory cells, and might protect them from naturally occurring xenobiotics.^{2,5-7}

Clone

Anti-P-glycoprotein (P-gp), clone 15D3, is generated from the fusion of Sp2/0 myeloma cells with spleen cells from BALB/c mice immunized with a BA3T3 fibroblast line (BATV.2) transfected with the human MDR1 gene.¹

Ig Chain Composition

Anti-P-glycoprotein (P-gp) is composed of mouse IgG₁ heavy chains and kappa light chains.

RESEARCH APPLICATION

- Studies of MDR in human cancers^{3,4,8,9}

DIRECT IMMUNOFLUORESCENCE

Product/Amount for Staining

Anti-P-glycoprotein (P-gp) PE
Cat. No. 340555
20 µL/test

Method for Direct Immunofluorescence

Add 20 µL of reagent to 50 µL of whole blood. Mix thoroughly and incubate for 15 to 30 minutes in the dark at room temperature (20° to 25°C). Lyse the erythrocytes with 1 mL FACS™ Lysing Solution† for 10 minutes. Wash with 1X phosphate-buffered saline (PBS) with 0.1% azide, add 0.5 mL of 1% paraformaldehyde, mix thoroughly, and analyze. If samples are not to be analyzed immediately, mix thoroughly just prior to analysis.

CAUTION: All excess Anti-P-glycoprotein antibody must be washed out prior to intracellular staining to avoid nonspecific internal staining.

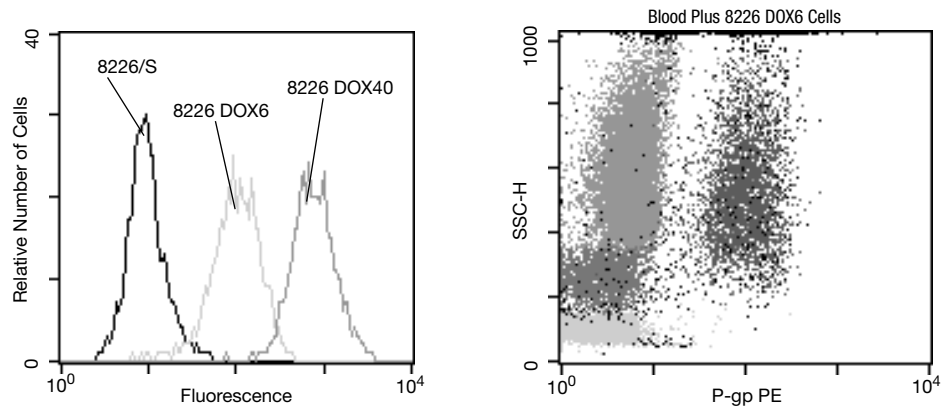
* US Patent No. 4,520,110; European Patent No. 76,695; Canadian Patent No. 1,179,942.

† US Patent Nos. 4,654,312; 4,902,613; and 5,098,849.

For research use only. Not for use in diagnostic or therapeutic procedures.

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Becton Dickinson Immunocytometry Systems
2350 Qume Drive
San Jose, CA 95131-1807
Ordering information (800) 223-8226; Customer Support Center (800) 448-BDIS



Cell Lines Analyzed with a FACS® Brand Flow Cytometer

HANDLING AND STORAGE

The PE conjugate is supplied in 1.0 mL of PBS. PBS contains gelatin and 0.1% sodium azide. Vials should be stored at 2° to 8°C. Conjugated forms should **not** be frozen and should be protected from prolonged exposure to light. Each reagent is stable for the period shown on the bottle label when stored as directed.

WARRANTY

The products sold hereunder are warranted only to conform to the quantity and contents stated on the label at the time of delivery to the customer. There are no warranties, expressed or implied, which extend beyond the description on the label of the product. Becton Dickinson's sole liability is limited to either replacement of the products or refund of the purchase price. Becton Dickinson is not liable for property damage, personal injury, or economic loss caused by the product.

CHARACTERIZATION

To ensure consistently high-quality reagents, each lot of monoclonal antibody is tested for conformance with characteristics of a standard reagent. Representative flow cytometric data are included in this data sheet.

WARNING

Reagents contain sodium azide. Sodium azide is harmful if swallowed. Keep out of reach of children. Keep away from food, drink, and animal feedingstuff. Wear suitable protective clothing. If swallowed, seek medical advice immediately and show this container or label. Contact with acids liberates very toxic gas. Azide compounds should be flushed with large volumes of water during disposal to avoid deposits in lead or copper plumbing where explosive conditions may develop.

REFERENCES

1. Shi R, Wrin J, Reeder J, Liu D, Ring DB. High-affinity monoclonal antibodies against P-glycoprotein. *Clin Immunol Immunopathol*. 1995;76:44-51.
2. Gupta S, Aggarwal S. P-glycoprotein in cells of the human immune system. *The Immunologist* 4/3. 1996;86-90.
3. List AF. Role of multidrug resistance and its pharmacological modulation in acute myeloid leukemia. *Leukemia*. 1996;10:937-942.
4. Filipits M, Suchomel RW, Dekan G, et al. MRP and MDR1 gene expression in primary breast carcinomas. *Clin Cancer Res*. 1996;2:1231-1237.
5. Drach D, Zhao S, Drach J, et al. Subpopulations of normal peripheral blood and bone marrow cells express a functional multidrug resistant phenotype. *Blood*. 1992;80:2729-2734.
6. Chaudhary PM, Mechetner EB, Roninson IB. Expression and activity of the multidrug resistance P-glycoprotein in human peripheral blood lymphocytes. *Blood*. 1992;80:2735-2739.
7. Klimecki WT, Gutscher BW, Grogan TM, Dalton WS. P-glycoprotein expression and function in circulating blood cells from normal volunteers. *Blood*. 1994;83:2451-2458.
8. Beck WT, Grogan TM, Willman CL, et al. Methods to detect P-glycoprotein-associated multidrug resistance in patients tumors: consensus recommendations. *Cancer Res*. 1996;56:3010-3020.
9. Chan HSL, Gaddad G, Zheng L, Bradley G, Dalton WS, Ling V. Sensitive immunofluorescence detection of the expression of P-glycoprotein in malignant cells. *Cytometry*. 1997;29:65-75.
10. Dalton WS, Dune BGM, Alberts DS, Gerlach JM, Cress AE. Characterization of a new drug-resistant human myeloma cell line that expresses P-glycoprotein. *Cancer Res*. 1986;46:5125-5130.