



HISTOPRIME[®]

CatNo E035

P170 Glycoprotein (MDR)

Lot: See Label

Storage: +2 to +8 °C

Exp. Date: See Label

Monoclonal Antibody against P170 Glycoprotein (multidrug-resistance related, MDR)

Specificity

The antibody JSB-1 reacts with a cytoplasmic epitope of a plasma membrane associated glycoprotein (170 -180 kD). It is also referred to as P-170 glycoprotein due to its molecular weight ("P" for permeability). The P-glycoprotein points to a strong structural similarity with the transport proteins of bacteria.

P-glycoproteins are found in various normal cells and are capable of transporting toxic substances out of cells. These cells typically have secretory or excretory properties, such as the renal proximal tubules, bile ducts, and adrenal cortex.

Contents

Reagents sufficient for about 50-100 tissue sections

1 dropper bottle **HISTOPRIME[®] P170 Glycoprotein (MDR)** (Bottle, 5 ml)

Application

Increased expression of P-glycoprotein is preferentially found in tumors derived from tissues in which it is originally present. These are mainly liver carcinomas, kidney carcinomas, colorectal carcinomas and carcinomas of the adrenal glands.

In most untreated tumors from other tissues, P-glycoprotein can only be detected in small amounts.

That phenomenon of multidrug resistance of tumor cells describes the simultaneous presence of cellular resistance to various cytostatic, antibiotics, alkaloids, or anthracyclines. This resistance is thought to be caused by increased expression of the P-glycoprotein.

The detection of a multidrug-resistant phenotype may have important consequences for therapy. First, it can be determined if tumors are resistant before therapy is started, and second, it can be determined during treatment when resistance occurs. In both cases, other drugs can be used for therapy.

Fusion Partners

BALB/c mice were immunized with the multidrug-resistant cell line ChRc5 derived from Chinese hamster ovarian tissue. After fusion of spleen cells from these mice with SP2/0 myeloma cells, the antibody-producing clone was identified by immunocytochemical staining of MDR cell lines.

E035-230109-1/2





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Characterization

Antigen	P-Glycoprotein (170kD)
Specificity	Recognition of a cytoplasmic epitope of plasma membrane associated P-Glycoprotein.
Normal Tissues	High expression in liver, kidney, colon, adrenal gland, pancreas and lung Low expression in bone marrow, ovary, muscle, prostate, stomach, brain
Clone	JSB-1
Isotype	Mouse IgG1
Pretreatment	After formaldehyde fixation and paraffin embedding, unmasking with HISTOSAFE-ENHANCER (LINARIS CatNo E7000) for 10-20 min at 96°C in a water bath or 2 x 5 min microwave 600 Watt is recommended. Also possible is pretreatment with 0.1% Pronase (LINARIS CatNo E110) 10 min room temperature.
Incubation Period	1 hour at room temperature
Control Tissue	Liver, Kidney, Colon, Adrenal, Pancreas, Lung
Application	Ready-to-use in PBS, BSA, NaN ₃ (0.09%) pH 7.4(*) suitable on cryostat sections and on formalin-fixed, paraffin-embedded tissue sections.
Recommended Secondary Reagents	Alkaline Phosphatase Vectastain [®] ABC Mouse IgG (Vector CatNo AK-5002) and Substrate-Kit e.g. Vector [®] Red (Vector CatNo SK-5100). Peroxidase Vectastain [®] ABC-Elite Mouse IgG (Vector CatNo PK-6102) and Peroxidase Substrate-Kit e.g. DAB (LINARIS CatNo E108) or HistoGreen (LINARIS CatNo E109).
References	<ol style="list-style-type: none">1. Bell D.R., Gerlach J.H., Buick R.N., Ling V. (1985) Detection of P-Glycoprotein in ovarian cancer. Molecular marker associated with multidrug resistance. J. Clin. Oncol.3; 311-3152. Gerrlach J.H., Bell D.R., Karakousis C., Slocum H.K., Kartner N., Rustum Y.M., Ling V., Baker M. (1987), 1452.3. Ma D.D.F., davey R.A., Harmann D.H., Isbister J.P., ScurrR.D., Mackertich S.M. Dowden G., Bell D.R. (1987) Detection of a multidrug resistant phenotype in acute nonlymphblastic leukaemia. Lancet 1; 135.4. Scheper, R.J. et al. (1988) Int. J. Cancer 42; 389-394

Differential identification is aided by the results from a panel of antibodies. Interpretation must be made within the context of the patient's clinical history and other diagnostics tests by a qualified pathologist.

(*)Note E035 contains Sodium Azide; take adequate precautions!

E035-230109-2/2

For Research use only. Not for use in diagnostic procedure

