### Overview

**Product name**
Anti-P Glycoprotein antibody [4E3]

**Description**
Mouse monoclonal [4E3] to P Glycoprotein

**Host species**
Mouse

**Specificity**
P-glycoprotein - 170 Kda (External Epitope) The 4E3 monoclonal antibody recognizes an epitope of the mdr1 encoded P-glycoprotein located on the exterior surface of the plasma membrane. 4E3 does not cross-react with the mdr3 gene product.

**Tested applications**
Suitable for: ICC, Flow Cyt, ICC/IF

**Species reactivity**
Reacts with: Human

**Immunogen**
Tissue/ cell preparation (Human squamous lung cancer cell line SW-1573/500).

**Positive control**
Cell Lines: Drug-sensitive parental cell lines and their multidrug-resistant derivatives. Tissue: Liver (positive staining detected along luminal surfaces of bile canaliculi) or colon (positive staining localized to luminal surface of secretory epithelium).

**General notes**
P-glycoprotein, the product of the MDR1 gene, is expressed in distinct non-malignant cells, typically cells with secretory and excretory functions. It is assumed to function as an ATP-dependent drug efflux pump with broad substrate specificity. The highest expression of P-glycoprotein has been observed in kidney (proximal tubules), liver (bile canaliculi), adrenal gland and intestine, suggesting that the primary role of P-glycoprotein is in the normal secretion of physiological metabolites and ingested chemicals into bile, urine and the lumen of the intestinal tract. Elevated levels of P-glycoprotein have also been reported in multidrug-resistant cell lines and in colon, endometrial, ovarian, and breast tumors, as well as in sarcomas and leukemias/lymphomas.

### Properties

**Form**
Liquid

**Storage instructions**
Shipped at 4°C. Store at +4°C short term (1-2 weeks). Store at -20°C or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**
Preservative: 0.1% Sodium Azide
Constituents: 1% BSA, PBS

**Purity**
Protein G purified
Primary antibody notes

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Clonality

Monoclonal

Clone number

4E3

Isotype

IgG2a

Applications

Our Abpromise guarantee covers the use of ab10333 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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<th>Application</th>
<th>Abreviews</th>
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<td>ICC</td>
<td>1/10.</td>
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<td>Flow Cyt</td>
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<td></td>
<td>ab170191</td>
<td>Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.</td>
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<tr>
<td>ICC/IF</td>
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<td>Use at an assay dependent concentration.</td>
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Target

Function

Energy-dependent efflux pump responsible for decreased drug accumulation in multidrug-resistant cells.

Tissue specificity

Expressed in liver, kidney, small intestine and brain.

Involvement in disease

Genetic variations in ABCB1 are associated with susceptibility to inflammatory bowel disease type 13 (IBD13) [MIM:612244]. Inflammatory bowel disease is characterized by a chronic relapsing intestinal inflammation. It is subdivided into Crohn disease and ulcerative colitis phenotypes. Crohn disease may involve any part of the gastrointestinal tract, but most frequently the terminal ileum and colon. Bowel inflammation is transmural and discontinuous; it may contain granulomas or be associated with intestinal or perianal fistulas. In contrast, in ulcerative colitis, the inflammation is continuous and limited to rectal and colonic mucosal layers; fistulas and granulomas are not observed. Both diseases include extraintestinal inflammation of the skin, eyes, or joints. Crohn disease and ulcerative colitis are commonly classified as autoimmune diseases.

Sequence similarities

Belongs to the ABC transporter superfamily. ABCB family. Multidrug resistance exporter (TC 3.A.1.201) subfamily.

Contains 2 ABC transmembrane type-1 domains.
Contains 2 ABC transporter domains.
Cellular localization
Membrane.

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