Monoclonal Antibody CD243 (P-glycoprotein)
PN IM1864 - 100 tests - 20 µL / test - Clone UIC2

For Research Use Only. Not for use in diagnostic procedures.

**SPECIFICITY**
The CD243 antigen, also known as P-glycoprotein (P-gp), is the 170-180 kDa multidrug resistance (MDR-1) gene product. It is a transmembrane protein belonging to the ATP binding cassette (ABC) transporter superfamily. P-gp is responsible for an ATP-dependent drug efflux of structurally diverse lipophilic substances including many anti-cancer chemotherapy agents. The molecule is comprised of two homologous halves connected by a linker peptide of approximately 75 amino acids. Each half spans the plasma membrane six times forming a drug-binding pore (1-3).

The CD243 antigen is mainly expressed in specialized epithelial cells with secretory or excretory functions. In the liver, CD243 is found on the biliary surface of hepatocytes and small biliary ductules, in the pancreas, on the laminal surface of the epithelial cells of small ductules and, in the kidney, on the brush border of the proximal tubules (4). Additional sites of expression include the gastro-intestinal tract, endothelial cells of the brain (5) as well as in the adrenal glands. Dye efflux studies have shown that in normal human peripheral blood lymphocytes, CD243 is expressed in the majority of CD56+ NK cells, CD8+ T cells and CD20+ B cells but in less than one half of CD4+ T cells. In contrast, no P-gp efflux was detectable in CD14+ monocytes (6). In normal bone marrow, CD243 antigen is detected in CD34+ hematopoietic stem cells (7).

The UIC2 monoclonal antibody (mAb) is a conformation-sensitive antibody that preferentially recognizes P-gp in the process of transporting substrate and that inhibits the ATP-dependent drug efflux (8-10). The UIC2 mAb has been shown to facilitate the efflux of cytotoxic substrates (11).

**APPLICATION**
Flow cytometry. Fluorescent microscopy.

**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. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
3. Do not use antibody beyond the expiration date on the label.
4. Avoid microbial contamination of reagents or incorrect results might occur.
5. Use good laboratory practices when handling this reagent.

**STORAGE CONDITIONS AND STABILITY**
Each reagent is stable up to the expiration date when stored in the dark at 2 – 8°C. Do not freeze. Samples, samples and all material coming in contact with them should be handled as if capable of transmitting infection and disposed of with proper precautions.

**REAGENT PREPARATION**

- **Source**: Ascites fluid
- **Purification**: Ion exchange or affinity chromatography
- **Buffer**: 2 mg/mL bovine serum albumin in phosphate-buffered saline containing 0.1% sodium azide.

**SELECTED RESEARCH REFERENCES**
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PRODUCT AVAILABILITY
Monoclonal Antibody CD243 (P-glycoprotein)
PN IM1864 – Liquid 2 mL – 100 tests – 20µL / 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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