



1P-764-T025

Monoclonal Antibody to CD243 Phycoerythrin (PE) conjugated (25 tests)

Clone:	UIC2
Isotype:	Mouse IgG2a
Specificity:	The mouse monoclonal antibody UIC2 recognizes an extracellular epitope on CD243 (MDR-1), an approximately 170 kDa ABC transporter expressed on hematopoietic stem cells, B, T, and NK cells, or on many multidrug resistant cancer cells. This antibody preferentially recognizes CD243 in the process of transporting substrate. 7th International HLDA Workshop
Regulatory Status:	RUO
Immunogen:	NIH 3T3 cells transfected with human CD243 (MDR-1) cDNA
Species Reactivity:	Human
Negative Species:	Mouse, Rat
Preparation:	The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in stabilizing phosphate buffered saline (PBS) solution containing 15mM sodium azide.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
Usage:	The reagent is designed for Flow Cytometry analysis of human blood cells using 10 µl reagent / 100 µl of whole blood or 10 ⁶ cells in a suspension. The content of a vial (0.25 ml) is sufficient for 25 tests.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD243, also known as multidrug resistant protein 1 (MDR-1) or P-glycoprotein (Pgp) is an ATP binding cassette (ABC)-containing efflux transporter for xenobiotic lipophilic compounds with broad substrate specificity. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. This protein also functions as a transporter in the blood-brain barrier. It is expressed in many tissues, including the brain, liver, pancreas, testes, kidney, and blood (B, T, NK cells, but not monocytes).

For laboratory research only, not for drug, diagnostic or other use.



Antibodies

- References:**
- *Chaudhary PM, Mechetner EB, Roninson IB: Expression and activity of the multidrug resistance P-glycoprotein in human peripheral blood lymphocytes. *Blood*. 1992 Dec 1;80(11):2735-9.
 - *Mechetner EB, Roninson IB: Efficient inhibition of P-glycoprotein-mediated multidrug resistance with a monoclonal antibody. *Proc Natl Acad Sci U S A*. 1992 Jul 1;89(13):5824-8.
 - *Goda K, Fenyvesi F, Bacsó Z, Nagy H, Márián T, Megyeri A, Krasznai Z, Juhász I, Vecsernyés M, Szabó G Jr: Complete inhibition of P-glycoprotein by simultaneous treatment with a distinct class of modulators and the UIC2 monoclonal antibody. *J Pharmacol Exp Ther*. 2007 Jan;320(1):81-8.
 - *Collnot EM, Baldes C, Schaefer UF, Edgar KJ, Wempe MF, Lehr CM: Vitamin E TPGS P-glycoprotein inhibition mechanism: influence on conformational flexibility, intracellular ATP levels, and role of time and site of access. *Mol Pharm*. 2010 Jun 7;7(3):642-51.
 - *Kelley DJ, Pavelic ZP, Gapany M, Stambrook P, Pavelic L, Gapany S, Gluckman JL: Detection of P-glycoprotein in squamous cell carcinomas of the head and neck. *Arch Otolaryngol Head Neck Surg*. 1993 Apr;119(4):411-4.

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