

Brilliant Violet 421™ anti-human CD243 (MDR-1)

Catalog # / Size: 2343090 / 100 tests
2343085 / 25 tests

Clone: UIC2

Isotype: Mouse IgG2a, κ

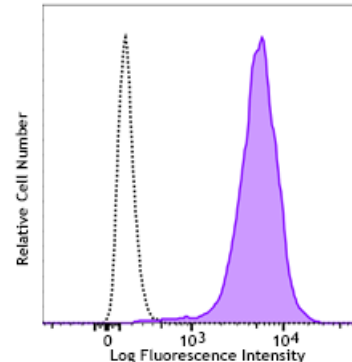
Immunogen: NIH 3T3 cells transfected with human MDR-1 cDNA

Reactivity: Human, Non-human primate

Preparation: The antibody was purified by affinity chromatography and conjugated with Brilliant Violet 421™ under optimal conditions. The solution is free of unconjugated Brilliant Violet 421™ and unconjugated antibody.

Formulation: Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA).

Concentration: Lot-specific



Human neuroblastoma cell line, SK-N-FI, was stained with human CD243 (MDR-1) (clone UIC2) Brilliant Violet 421™ (filled histogram) or mouse IgG2a, κ Brilliant Violet 421™ isotype control (open histogram).

Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.

Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd.

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Application Notes: Additional reported applications (for the relevant formats) include: blocking the efflux of fluorescent dyes^{1,2}, immunoprecipitation¹, and immunohistochemical staining of tissue sections of squamous cell carcinoma³.

Application**References:**

1. Mechetner EB and Roninson IB. 1992. *Proc. Natl. Acad. Sci. USA* 13:5824. (Block, IP)
 2. Chaudhary PM, *et al.* 1992. *Blood* 80:2735. (Block)
 3. Kelley DJ, *et al.* 1993. *Arch. Otolaryngol. Head Neck Surg.* 119:411. (IHC-P)
 4. Goda K, *et al.* 2007. *J. Pharmacol. Exp. Ther.* 320:81. (Block)
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Description:

CD243 (MDR-1) belongs to the ATP binding cassette (ABC) transporter family. With an approximate molecular mass of 170 kD, it consists of two homologous halves. Each half contains two hydrophobic transmembrane domains (TMDs) and two hydrophilic nucleotide binding domains (NBDs). The TMDs span the membrane six times, forming a chamber with a 12 transmembrane α -helix structure. NBDs drive the transport process through ATP coupling and hydrolysis and are located at the cytoplasmic face of the membrane. CD243 transports various molecules across cellular membranes and is involved in multidrug resistance. MDR-1 is expressed on hematopoietic stem cells, T cells, B cells, and NK cells as well as on many multidrug resistant neoplastic cells. CD243 interacts with Caveolin, RING finger protein 1B, AAP1, p53, Orphan nuclear receptor PX, and cytochrome P450.

**Antigen
References:**

1. Dulucq S, *et al.* 2008. *Blood* 112:2024.
2. Gottesman MM, *et al.* 2009. *Nat. Biotechnol.* 27:546.
3. Andreadis C, *et al.* 2007. *Blood* 109:3409.