Datasheet: MCA2671F

Description: MOUSE ANTI HUMAN CD243:FITC

Specificity: CD243

Other names: MULTIDRUG RESISTANCE PROTEIN 1

Format: FITC

Product Type: Monoclonal Antibody

Clone: UIC2

Isotype: IgG2a

Quantity: 0.1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.abdserotec.com/protocols.

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Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Primate
Does not react with: Mouse, Rat

N.B. Antibody reactivity and working conditions may vary between species.

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide (NaN₃)
1% Bovine Serum Albumin

Approx. Protein Concentrations

IgG concentration 0.1mg/ml

Immunogen

Mouse Balb/c 3T3 fibroblasts transfected with human CD243 cDNA.

External Database Links

UniProt:
**Related reagents**

Entrez Gene:

5243  ABCB1

**Synonyms**

MDR1, PGY1

**Specificity**

Mouse anti Human CD243, clone UIC2 recognizes an extracellular conformational epitope of CD243, also known as MDR1 (multi-drug resistance protein 1) and Pgp (P-glycoprotein), a multi pass transmembrane protein and member of the ABC transporter (ATP-binding cassette) family, containing two ABC transporter type 1 domains and two ABC transporter domains. CD243 acts as an active efflux pump for a diverse range of lipophillic compounds.

CD243 is expressed at low levels in the cell membrane of peripheral blood leucocytes, and constitutively expressed on the apical plasma membrane of excretory epithelial cells of the kidney, liver, brain and small intestine. CD243 mediates resistance to many chemotherapeutic agents used for tumour suppression and is therefore of special interest to oncologists. Clone UIC2 is a strong inhibitor of CD243-mediated efflux and of the resistance of MDR cells to CD243 transported cytotoxic drugs.

Clone UIC2 can be used in a shift assay to selectively demonstrate the expression and functional activity of CD243 in a target cell (Park et al. 2003). Clone UIC2 does not cross-react with mitochondrial pyruvate carboxylase. Exposure of monocytes, which do not constitutively express CD243 leads to an increase in surface expression and a significant enhancement of its substrate efflux activity. This increase in cell surface expression and efflux activity has implications for the drug resistance actions of CD243, not allowing concentrations of therapeutic agents such as cyclosporine (ritonavir) to reach beneficial levels in cells (Tempestilli et al. 2014).

**Flow Cytometry**

Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.

**References**


**Storage**

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
Shelf Life

18 months from date of despatch.

Health And Safety Information

Material Safety Datasheet Documentation #10041 available at:

Regulatory

For research purposes only