ARG23452
anti-MDR1 / P Glycoprotein 1 antibody [UIC2]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [UIC2] recognizes MDR1 / P Glycoprotein 1 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 Â 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).
Tested Reactivity	Hu, NHuPrm
Species Does Not React With	Ms, Rat
Tested Application	FACS, ICC/IF, IHC-Fr, IHC-P, IP
Host	Mouse
Clonality	Monoclonal
Clone	UIC2
Isotype	IgG2a
Target Name	MDR1 / P Glycoprotein 1
Species	Human
Immunogen	Mouse Balb/c 3T3 fibroblasts transfected with human CD243 cDNA.
Conjugation	Un-conjugated
Alternate Names	PGY1; ABC20; P-GP; ATP-binding cassette sub-family B member 1; Multidrug resistance protein 1; CD antigen CD243; GP170; CLCS; CD243; MDR1; EC 3.6.3.44; P-glycoprotein 1

Application Instructions

Application table

Application	Dilution
FACS	Neat
ICC/IF	Assay-dependent
IHC-Fr	Assay-dependent
IHC-P	Assay-dependent
IP	Assay-dependent

Application Note	IHC-P: Antigen Retrieval: Boil tissue section in Sodium citrate buffer (pH 6.0). FACS: Use 10 µl of the suggested working dilution to label 10^6 cells in 100 µl. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Purification with Protein A.
Buffer	PBS and 0.09% Sodium azide.
Preservative	0.09% Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	ABCB1
Gene Full Name	ATP-binding cassette, sub-family B (MDR/TAP), member 1
Background	The membrane-associated protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MDR/TAP subfamily. Members of the MDR/TAP subfamily are involved in multidrug resistance. The protein encoded by this gene is an ATP-dependent drug efflux pump for xenobiotic 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. [provided by RefSeq, Jul 2008]
Function	Energy-dependent efflux pump responsible for decreased drug accumulation in multidrug-resistant cells. [UniProt]
Calculated Mw	141 kDa