Cells selected for resistance to a single cytotoxic drug may become cross-resistant to a broad range of drugs with different structures and cellular targets. This phenomenon is called multiple drug resistance (MDR). MDR proteins (Mdr1) are members of a highly conserved superfamily of ATP-binding cassette transport proteins. Mdr-1 is an apical transmembrane protein that is an integral part of the blood-brain barrier and functions as a drug-transport pump transporting a variety of drugs from the brain back into the blood. The Mdr-1 gene is known as ABCB1 and is located on human chromosome 7q21.12. The mouse homolog of Mdr-1 is known as Mdr-3. Interestingly, a murine protein by the name of Mdr-1 exists and is encoded by the murine Abcb1b gene, but it is not homologous with human Mdr-1.

**Chromosomal Location**

Genetic locus: ABCB1 (human) mapping to 7q21.12.

**Source**

Mdr-1 (UIC2) is a mouse monoclonal antibody raised against Mdr-1 of human origin.

**Product**

Each vial contains 200 µg IgG2a kappa light chain in 1.0ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available azide-free for inhibition of P-glycoprotein efflux activity in functional experiments, sc-73354 L, 200 µg/0.1 ml.

Mdr-1 (UIC2) is available conjugated to either phycoerythrin (sc-73354 PE) or fluorescein (sc-73354 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

**Applications**

Mdr-1 (UIC2) is recommended for detection of Mdr-1 P-glycoprotein of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells), non-cross-reactive with mouse and rat tissues.

Suitable for use as control antibody for Mdr-1 siRNA (h): sc-29395, Mdr-1 shRNA Plasmid (h): sc-29395-SH and Mdr-1 shRNA (h) Lentiviral Particles: sc-29395-V.

Molecular Weight of Mdr-1: 170 kDa.

**Recommended Support Reagents**

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml), 2) Immunofluorescence: use m-IgGk BP-FITC, sc-516140 or m-IgGk BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850, 3) Immunohistochemistry: use m-IgGk BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limone Mount: sc-45087.

**Storage**

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**Select Product Citations**


**Research Use**

For research use only, not for use in diagnostic procedures.

**Protocols**

See our web site at www.scbt.com for detailed protocols and support products.

**See Mdr-1 (D-11): sc-55510 for Mdr-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790."