**BACKGROUND**

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 (MDRs) 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. Mdr-3 is associated with a malignant phenotype in B cell lymphocytic leukemias. The Mdr-1 gene is known as ABCB1 and is located on human chromosome 7. 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. Similarly, the human Mdr-3 gene, which is known as ABCB4, also maps to chromosome 7q21.12. The mouse homolog of Mdr-3 is designated Mdr-2.

**CHROMOSOMAL LOCATION**

Genetic locus: ABCB1/ABCB4 (human) mapping to 7q21.12; Abcb1b/Abcb1a/Abcb4 (mouse) mapping to 5 A1.

**SOURCE**

Mdr (H-241) is a rabbit polyclonal antibody raised against amino acids 1040-1280 of Mdr-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG in 1.0 ml of PBS with <0.1% sodium azide and 0.1% gelatin.

Mdr (H-241) is available conjugated to agarose (sc-8313 AC), 500 µg/0.25 ml agarose in 1 ml, for IP.

**APPLICATIONS**

Mdr (H-241) is recommended for detection of Mdr-1 and Mdr-3 of mouse, rat and human origin, and Mdr-2 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Mdr (H-241) is also recommended for detection of Mdr-1 and Mdr-3 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of Mdr: 170 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, HeLa whole cell lysate: sc-2200 or MES-SA/Dx5 cell lysate: sc-2284.

**STORAGE**

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

**RESEARCH USE**

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

**DATA**

Mdr (H-241): sc-8313. Western blot analysis of Mdr expression in MES-SA/Dx5 whole cell lysate.

Mdr (H-241): sc-8313. Immunofluorescence staining of methanol-fixed MES-SA/Dx5 cells showing membrane localization (A). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human liver tissue showing membrane staining of hepatocytes (B).

**SELECT PRODUCT CITATIONS**