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. The multiple drug resistance (Mdr) gene encodes a 170 kDa glycoprotein (P-glycoprotein) that is a member of a highly conserved superfamily of ATP-binding cassette transport proteins. P170 glycoprotein functions as an energy-dependent efflux pump for structurally diverse agents ranging from ions to peptides. P170 glycoprotein has been implicated in the development of the multiple drug resistance observed in human cancer cells following prolonged chemotherapy. The classic form of Mdr is associated with an increase in P-glycoprotein, but not all cases of Mdr can be attributed to a rise in the levels of P-glycoprotein. In cell lines not expressing increased levels of P-glycoprotein, researchers found an increase in the level of a novel protein designated as Mdr-associated protein (MRP).

REFERENCES

CHROMOSOMAL LOCATION
Genetic locus: ABCB1 (human) mapping to 7q21; Abcb1 (mouse) mapping to 5 A2-A3.

SOURCE
Mdr (C219) is a mouse monoclonal antibody raised against SDS-solubilized plasma membranes of hamster origin.

PRODUCT
Each vial contains 100 µg IgG2a in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS
Mdr (C219) is recommended for detection of Mdr of mouse, rat, human and hamster 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) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with cerbB2.

Molecular Weight of Mdr: 170 kDa.
Positive Controls: MES-SA/Dx5 cell lysate: sc-2284, ZR-75-1 cell lysate: sc-2241 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2050 or ABC: sc-2017 mouse IgG Staining Systems.

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.

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