

Product Information

Anti-MRP2 antibody

Mouse monoclonal, clone CPR96
purified from hybridoma cell culture

Product Number **M3692**

Product Description

Anti-MRP2 antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the CPR96 hybridoma produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to a C-terminal fragment of human MRP2 with an N-terminal added cysteine, conjugated to KLH. The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2.

Monoclonal Anti-MRP2 recognizes human MRP2 (~180 kDa) by various immunochemical techniques including immunoblotting and ELISA.

Multidrug Resistance-associated Protein 2 (MRP2), also designated canalicular Multispecific Organic Anion Transporter (cMOAT), cMRP, and ABCC2, is a member of the CFTR/MRP (ABCC) subfamily of the large ATP-Binding Cassette (ABC) transporter family of transmembrane proteins. Seven MRPs are known. These integral glycoproteins function as export 'pumps' and extrude a broad range of compounds from the cell. Together with MDR1 (Pgp1) and the Lung Resistance-related Protein (LRP, MVP), MRP1-3 are involved in the simultaneous expression of cellular resistance to a variety of structurally and functionally unrelated drugs (Multidrug Resistance).^{1,2} This phenomenon is considered a major obstacle to successful chemotherapy.

MRP2 is normally expressed in the liver, gallbladder, kidney proximal tubules, placenta, duodenum, and small intestine. Localization pattern appears to vary in different species. MRP2 is predominantly localized to the apical membrane of polarized cells. In such cells retargeting to the basolateral membrane or to cytoplasmic vesicles may occur in response to various stimuli. MRP2 transports endogenous and exogenous anionic conjugates from hepatocytes to the bile.

Thus it contributes to bile flow and plays a role in detoxification and defense against oxidative stress.^{3,4} Patients with the rare autosomal recessive Dubin-Johnson Syndrome develop a mild liver disease caused by MRP2 deficiency.^{6,7} Upregulation of MRP2 expression may be found in hepatocellular carcinomas.⁸

Monoclonal antibodies to MRP2 are an essential tool for studying drug resistance processes in cancer cells.

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~1.5 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots at –20 °C. Repeated freezing and thawing, or storage in frost-free freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working antibody concentration of 1–2 µg/mL is recommended using cell extracts of 293T cells transfected with human MRP2.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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