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Goat Anti-MRP5 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1683a

Specification

Goat Anti-MRP5 Antibody - Product Information

Application	**WB, IHC**
Primary Accession	O15440
Other Accession	NP_001018881, 10057, 27416 (mouse), 116721 (rat)
Reactivity	**Human**
Predicted	**Mouse, Rat, Pig, Dog, Cow**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**160660**

Goat Anti-MRP5 Antibody - Additional Information

Gene ID 10057

Other Names
Multidrug resistance-associated protein 5, ATP-binding cassette sub-family C member 5, Multi-specific organic anion transporter C, MOAT-C, SMRP, pABC11, ABCC5, MRP5

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-MRP5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-MRP5 Antibody - Protein Information

Name ABCC5

Synonyms MRP5

Function
ATP-dependent transporter of the ATP-binding cassette (ABC) family that actively extrudes physiological compounds, and xenobiotics from cells. Mediates ATP-dependent transport of

endogenous metabolites such as cAMP and cGMP, folic acid and N-lactoyl-amino acids (in vitro) (PubMed:10893247, PubMed:15899835, PubMed:25964343, PubMed:17229149, PubMed:12695538, PubMed:12637526). Acts also as a general glutamate conjugate and analog transporter that can limit the brain levels of endogenous metabolites, drugs, and toxins (PubMed:26515061). Confers resistance to the antiviral agent PMEA (PubMed:12695538). Able to transport several anticancer drugs including methotrexate, and nucleotide analogs in vitro, however it does with low affinity, thus the exact role of ABCC5 in mediating resistance still needs to be elucidated (PubMed:10840050, PubMed:15899835, PubMed:12435799, PubMed:12695538). Acts as a heme transporter required for the translocation of cytosolic heme to the secretory pathway (PubMed:24836561). May play a role in energy metabolism by regulating the glucagon-like peptide 1 (GLP-1) secretion from enteroendocrine cells (By similarity).

Cellular Location
Basolateral cell membrane; Multi-pass membrane protein. Golgi apparatus lumen Endosome membrane. Cytoplasmic granule {ECO:0000250|UniProtKB:Q9R1X5}. Apical cell membrane; Multi-pass membrane protein. Note=In most cells, routes to the basolateral plasma membrane, but in the brain capillary endothelial cells that form the blood-brain barrier, resides in the apical membrane

Tissue Location
[Isoform 3]: Predominant isoform in retinal pigment epithelium, bladder, and stomach.

Goat Anti-MRP5 Antibody - Protocols

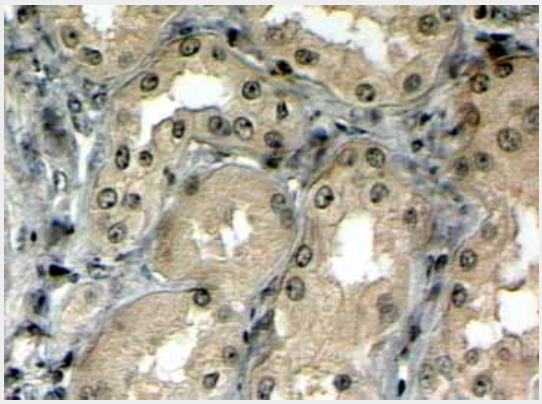
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

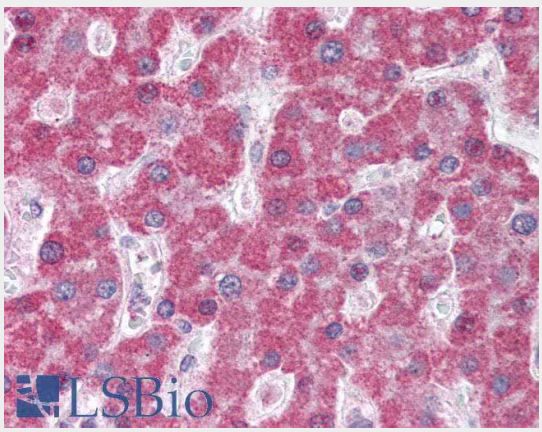
Goat Anti-MRP5 Antibody - Images



AF1683a (0.5 µg/ml) staining of Human Frontal Cortex lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.



AF1683a (4 µg/ml) staining of paraffin embedded Human Kidney. Steamed antigen retrieval with citrate buffer pH 6, HRP-staining. Similar results with antigen retrieval at pH9.



AF1683a (5 µg/ml) staining of paraffin embedded Human Liver. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Goat Anti-MRP5 Antibody - Background

The 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 MRP subfamily which is involved in multi-drug resistance. This protein functions in the cellular export of its substrate, cyclic nucleotides. This export

contributes to the degradation of phosphodiesterases and possibly an elimination pathway for cyclic nucleotides. Studies show that this protein provides resistance to thiopurine anticancer drugs, 6-mercatopurine and thioguanine, and the anti-HIV drug 9-(2-phosphonylmethoxyethyl)adenine. This protein may be involved in resistance to thiopurines in acute lymphoblastic leukemia and antiretroviral nucleoside analogs in HIV-infected patients. Alternative splicing of this gene has been detected; however, the complete sequence and translation initiation site is unclear.

Goat Anti-MRP5 Antibody - References

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.
Inhibition of tetramethylpyrazine on P-gp, MRP2, MRP3 and MRP5 in multidrug resistant human hepatocellular carcinoma cells. Wang XB, et al. Oncol Rep, 2010 Jan. PMID 19956884.
Human skeletal muscle drug transporters determine local exposure and toxicity of statins. Knauer MJ, et al. Circ Res, 2010 Feb 5. PMID 19940267.
Gene-centric association signals for lipids and apolipoproteins identified via the HumanCVD BeadChip. Talmud PJ, et al. Am J Hum Genet, 2009 Nov. PMID 19913121.
Dependence of multidrug resistance protein-mediated cyclic nucleotide efflux on the background sodium conductance. Kucka M, et al. Mol Pharmacol, 2010 Feb. PMID 19903828.