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ABCC4 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1829a

Product Information

Application	WB, IHC, FC, E
Primary Accession	O15439
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6A7H3
Isotype	IgG1
Calculated MW	149527
Description	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. The specific function of this protein has not yet been determined; however, this protein may play a role in cellular detoxification as a pump for its substrate, organic anions. Alternative splicing results in multiple splice variants encoding different isoforms.
Immunogen	Purified recombinant fragment of human ABCC4 (AA: 631-692) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	10257
Other Names	Multidrug resistance-associated protein 4, ATP-binding cassette sub-family C member 4, MRP/cMOAT-related ABC transporter, Multi-specific organic anion transporter B, MOAT-B, ABCC4, MRP4
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
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	ABCC4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ABCC4
Synonyms	MOATB, MRP4 {ECO:0000303|PubMed:29175180
Function	ATP-dependent transporter of the ATP-binding cassette (ABC) family that actively extrudes physiological compounds and xenobiotics from cells (PubMed:11856762, PubMed:12523936, PubMed:15364914, PubMed:38886124, PubMed:40138312). Transports a range of endogenous molecules that have a key role in cellular communication and signaling, including cyclic nucleotides such as cyclic AMP (cAMP) and cyclic GMP (cGMP), bile acids, steroid conjugates, urate, and prostaglandins (PubMed:11856762, PubMed:12523936, PubMed:12835412, PubMed:12883481, PubMed:15364914, PubMed:15454390, PubMed:16282361, PubMed:17959747, PubMed:18300232, PubMed:26721430, PubMed:38886124, PubMed:40138312). Mediates the ATP-dependent efflux of glutathione conjugates such as leukotriene C4 (LTC4) and leukotriene B4 (LTB4) too. The presence of GSH is necessary for the ATP-dependent transport of LTB4, whereas GSH is not required for the transport of LTC4 (PubMed:17959747). Mediates the cotransport of bile acids with reduced glutathione (GSH) (PubMed:12523936, PubMed:12883481, PubMed:16282361). May contribute to hepatic, intestinal and renal excretion of steroid conjugates. Selectively transports steroid glucuronates and sulfates. Mediates the efflux of estrogens glucuronated at C-16 and C-17 positions, but has no transporter activity toward estrogens glucuronated at C-3. Has high affinity for dehydroepiandrosterone-3-sulfate and can also transport testosterone-17-sulfate, but has no transporter activity toward androsterone and etiocholanolone sulfate conjugates. Does not transport estrone 3-sulfate (PubMed:29175180, PubMed:39993711). Displays low affinity and high transport velocity for folates (PubMed:12036927). Transports a wide range of drugs and their metabolites. including anticancer, antiviral and antibiotic molecules (PubMed:11856762, PubMed:12105214, PubMed:15454390, PubMed:17344354, PubMed:18300232). May confer resistance to anticancer agents. Can mediate the efflux of methotrexate but is inactive toward polyglutaminated methotrexate, which is the predominant intracellular form (PubMed:11106685, PubMed:12036927).
Cellular Location	Basolateral cell membrane; Multi-pass membrane protein. Apical cell membrane; Multi-pass membrane protein. Note=Its localization to the basolateral or apical membranes is tissue-dependent.
Tissue Location	Widely expressed, with particularly high levels in prostate, but is barely detectable in liver. sinusoidal membrane of hepatocytes

Background

The protein encoded by this gene is an interleukin 3 specific subunit of a heterodimeric cytokine receptor. The receptor is comprised of a ligand specific alpha subunit and a signal transducing beta subunit shared by the receptors for interleukin 3 (IL3), colony stimulating factor 2 (CSF2/GM-CSF), and interleukin 5 (IL5). The binding of this protein to IL3 depends on the beta subunit. The beta subunit is activated by the ligand binding, and is required for the biological activities of IL3. This gene and the gene encoding the colony stimulating factor 2 receptor alpha chain (CSF2RA) form a cytokine receptor gene cluster in a X-Y pseudoautosomal region on chromosomes X or Y. Alternatively spliced transcript variants encoding distinct isoforms have been found. ; ; ; ;

References

1. Biochem Pharmacol. 2012 Aug 1;84(3):366-73. 2. Arch Dermatol Res. 2012 Jan;304(1):57-63.

Images

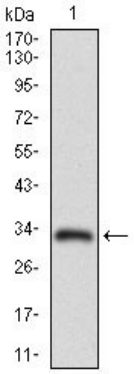


Figure 1: Western blot analysis using ABCC4 mAb against human ABCC4 recombinant protein. (Expected MW is 32.4 kDa)

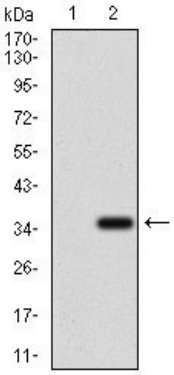


Figure 2: Western blot analysis using ABCC4 mAb against HEK293 (1) and ABCC4 (AA: 631-692)-hIgGFc transfected HEK293 (2) cell lysate.

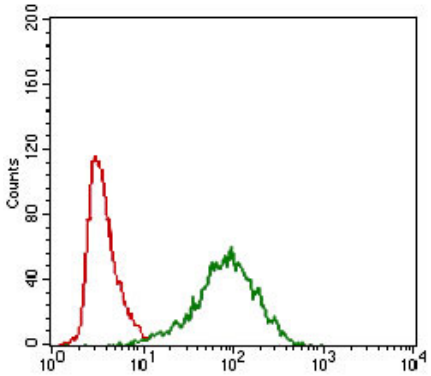


Figure 3: Flow cytometric analysis of A549 cells using ABCC4 mouse mAb (green) and negative control (red).

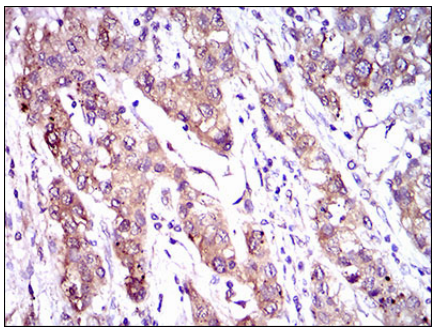


Figure 4: Immunohistochemical analysis of paraffin-embedded liver cancer tissues using ABCC4 mouse mAb with DAB staining.

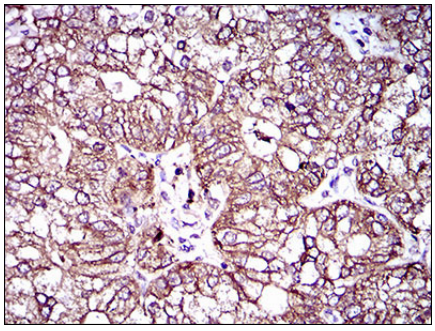


Figure 5: Immunohistochemical analysis of paraffin-embedded esophagus cancer tissues using ABCC4 mouse mAb with DAB staining.

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