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SLC27A2 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1828a

Product Information

Application	WB, IHC, E
Primary Accession	O14975
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	6B3A9
Isotype	IgG1
Calculated MW	70312
Description	The protein encoded by this gene is an isozyme of long-chain fatty-acid-coenzyme A ligase family. Although differing in substrate specificity, subcellular localization, and tissue distribution, all isozymes of this family convert free long-chain fatty acids into fatty acyl-CoA esters, and thereby play a key role in lipid biosynthesis and fatty acid degradation. This isozyme activates long-chain, branched-chain and very-long-chain fatty acids containing 22 or more carbons to their CoA derivatives. It is expressed primarily in liver and kidney, and is present in both endoplasmic reticulum and peroxisomes, but not in mitochondria. Its decreased peroxisomal enzyme activity is in part responsible for the biochemical pathology in X-linked adrenoleukodystrophy. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.
Immunogen	Purified recombinant fragment of human SLC27A2 (AA: 346-405) expressed in E. Coli.
Formulation	Purified antibody in PBS with 0.05% sodium azide

Additional Information

Gene ID	11001
Other Names	Very long-chain acyl-CoA synthetase, VLACS, VLCS, 6.2.1.-, Fatty acid transport protein 2, FATP-2, Fatty-acid-coenzyme A ligase, very long-chain 1, Long-chain-fatty-acid--CoA ligase, 6.2.1.3, Solute carrier family 27 member 2, THCA-CoA ligase, Very long-chain-fatty-acid-CoA ligase, SLC27A2, ACSVL1, FACVL1, FATP2, VLACS
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 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	SLC27A2 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name	SLC27A2
Synonyms	ACSVL1, FACVL1, FATP2, VLACS
Function	Mediates the import of long-chain fatty acids (LCFA) into the cell by facilitating their transport across cell membranes, playing an important role in hepatic fatty acid uptake (PubMed:10198260, PubMed:10749848, PubMed:11980911, PubMed:20530735, PubMed:22022213, PubMed:24269233). Also functions as an acyl-CoA ligase catalyzing the ATP-dependent formation of fatty acyl-CoA using LCFA and very-long- chain fatty acids (VLCFA) as substrates, which prevents fatty acid efflux from cells and might drive more fatty acid uptake (PubMed:10198260, PubMed:10749848, PubMed:11980911, PubMed:20530735, PubMed:22022213, PubMed:24269233). Plays a pivotal role in regulating available LCFA substrates from exogenous sources in tissues undergoing high levels of beta-oxidation or triglyceride synthesis (PubMed:20530735). Can also activate branched-chain fatty acids such as phytanic acid and pristanic acid (PubMed:10198260). May contribute to the synthesis of sphingosine-1-phosphate (PubMed:24269233). Does not activate C24 bile acids, cholate and chenodeoxycholate (PubMed:11980911). In vitro, activates 3-alpha,7-alpha,12-alpha- trihydroxy-5-beta-cholestanate (THCA), the C27 precursor of cholic acid deriving from the de novo synthesis from cholesterol (PubMed:11980911). However, it is not critical for THCA activation and bile synthesis in vivo (PubMed:20530735).
Cellular Location	Endoplasmic reticulum membrane; Multi-pass membrane protein. Peroxisome membrane; Peripheral membrane protein. Cell membrane; Multi-pass membrane protein. Microsome
Tissue Location	[Isoform 1]: Expressed in liver, kidney, placenta, intestine, brain, heart, and colon (PubMed:10198260, PubMed:21768100, PubMed:24269233). Predominantly expressed in liver (PubMed:20530735)

Background

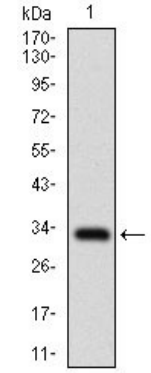
The protein encoded by this gene is a member of the superfamily of ATP-binding cassette (ABC) transporters. ABC proteins transport various molecules across extra- and intra-cellular membranes. ABC genes are divided into seven distinct subfamilies (ABC1, MDR/TAP, MRP, ALD, OABP, GCN20, White). This protein is a member of the MRP subfamily which is involved in multi-drug resistance. 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. ; ;

References

1. PLoS One. 2011;6(10):e25865. 2. Eur J Cancer. 2011 Feb;47(3):420-7.

Images

Figure 1: Western blot analysis using SLC27A2 mAb against human SLC27A2 recombinant protein. (Expected MW is 32.4



kDa)

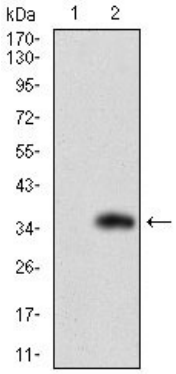


Figure 2: Western blot analysis using SLC27A2 mAb against HEK293 (1) and SLC27A2 (AA: 346-405)-hIgGFc transfected HEK293 (2) cell lysate.

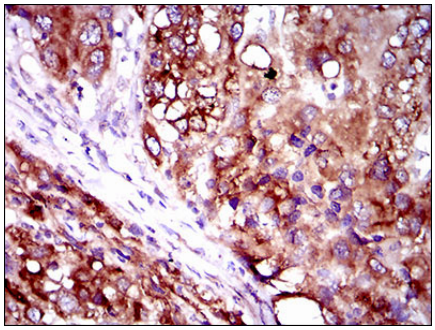


Figure 3: Immunohistochemical analysis of paraffin-embedded liver cancer tissues using SLC27A2 mouse mAb with DAB staining.

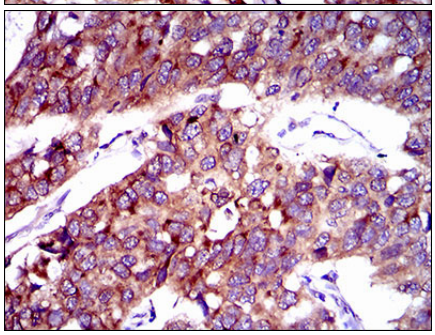


Figure 4: Immunohistochemical analysis of paraffin-embedded esophageal cancer tissues using SLC27A2 mouse mAb with DAB staining.