10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-SLC10A1 Picoband Antibody

Catalog # ABO12431

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	O08705
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Sodium/bile acid cotransporter(SLC10A1) detection. Tested with WB, IHC-P, IHC-F in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	20493
Other Names	Sodium/bile acid cotransporter, Na(+)/bile acid cotransporter, Na(+)/taurocholate transport protein, Sodium/taurocholate cotransporting polypeptide, Solute carrier family 10 member 1, Slc10a1, Ntcp
Calculated MW	39413
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, By Heat Immunohistochemistry(Frozen Section), 0.5-1 □g/ml Western blot, 0.1-0.5 □g/ml
Subcellular Localization	Membrane; Multi-pass membrane protein.
Source	Eukaryota
Protein Name	Sodium/bile acid cotransporter
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of mouse SLC10A1 (296-336aa EGLLFIIIFRCYLKIKPQKDQTKITYKAAATEDATPAALEK), different from the related human sequence by eighteen amino acids, and from the related rat sequence by three amino a
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.

Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name	Slc10a1
Synonyms	Ntcp
Function	As a major transporter of conjugated bile salts from plasma into the hepatocyte, it plays a key role in the enterohepatic circulation of bile salts necessary for the solubilization and absorption of dietary fat and fat-soluble vitamins (PubMed:10209268). It is strictly dependent on the extracellular presence of sodium (PubMed:10209268, PubMed:34060352). It exhibits broad substrate specificity and transports various bile acids, such as taurocholate, cholate, as well as non-bile acid organic compounds, such as estrone sulfate (PubMed:10209268, PubMed:34060352). Works collaboratively with the ileal transporter (NTCP2), the organic solute transporter (OST), and the bile salt export pump (BSEP), to ensure efficacious biological recycling of bile acids during enterohepatic circulation (By similarity).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:Q14973}; Multi-pass membrane protein {ECO:0000250|UniProtKB:Q14973}
Tissue Location	[Isoform 1]: Expressed in liver in higher amounts than isoform 2.

Background

Na+-taurocholate cotransporting polypeptide (NTCP), also known as SLC10A1 (Solute carrier family 10, member 1), is the major bile acid uptake system in human hepatocytes. NTCP and the ileal transporter ASBT (apical sodium-dependent bile acid transporter) are two sodium-dependent transporters critical for the enterohepatic circulation of bile acids. The hASBT gene is known to be activated by the glucocorticoid receptor (GR). Ho RH et al. indicates functionally important polymorphisms in NTCP exist and that the like lihood of being carriers of such polymorphisms is dependent on ethnicity.

Images



Figure 1. Western blot analysis of SLC10A1 using anti-SLC10A1 antibody (ABO12431). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: Rat Liver Tissue Lysate,Lane 2: Mouse Liver Tissue Lysate. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-SLC10A1 antigen affinity purified polyclonal antibody (Catalog # ABO12431) at 0.5 □¼g/mL overnight at 4 □°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific

band was detected for SLC10A1 at approximately 50KD. The expected band size for SLC10A1 is at 38KD.

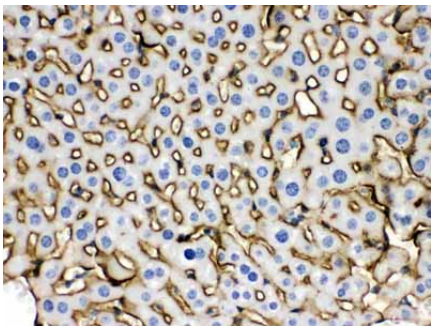


Figure 2. IHC analysis of SLC10A1 using anti-SLC10A1 antibody (ABO12431).SLC10A1 was detected in paraffin-embedded section of Mouse Liver Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-SLC10A1 Antibody (ABO12431) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

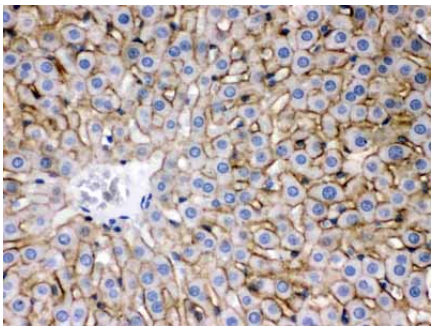


Figure 3. IHC analysis of SLC10A1 using anti-SLC10A1 antibody (ABO12431).SLC10A1 was detected in paraffin-embedded section of Rat Liver Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-SLC10A1 Antibody (ABO12431) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

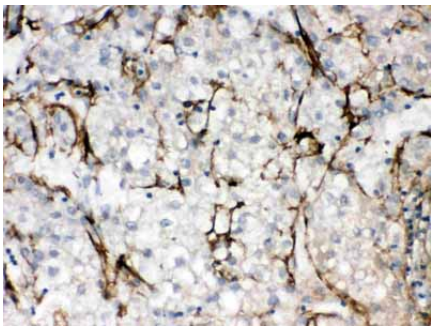


Figure 4. IHC analysis of SLC10A1 using anti-SLC10A1 antibody (ABO12431).SLC10A1 was detected in paraffin-embedded section of Human Liver Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-SLC10A1 Antibody (ABO12431) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

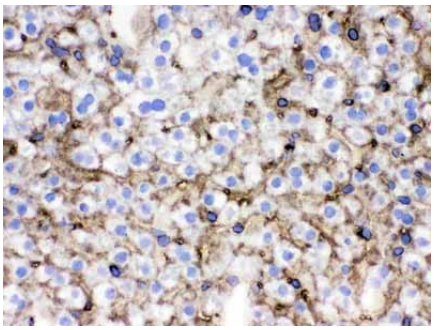


Figure 5. IHC analysis of SLC10A1 using anti-SLC10A1 antibody (ABO12431).SLC10A1 was detected in frozen section of mouse liver tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 □¼g/ml rabbit anti-SLC10A1 Antibody (ABO12431) overnight at 4 □°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 □°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) with DAB as the chromogen.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.