

**SLC38A4 Antibody**  
**Catalog # ASC11953****Specification****SLC38A4 Antibody - Product Information**

Application	WB, IHC
Primary Accession	<a href="#">Q969I6</a>
Other Accession	<a href="#">NP_060488</a> , <a href="#">18482385</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 60 kDa; Observed: 60 kDa
Application Notes	SLC38A4 antibody can be used for the detection of SLC38A4 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunohistochemistry starting at 2.5 µg/mL.

**SLC38A4 Antibody - Additional Information**Gene ID **55089****Target/Specificity**

SLC38A4; SLC38A4 antibody is human and mouse reactive. SLC38A4 will not cross-react with other members of the SLC38 protein family.

**Reconstitution & Storage**

SLC38A4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

SLC38A4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**SLC38A4 Antibody - Protein Information**Name SLC38A4 ([HGNC:14679](#))**Function**

Symporter that cotransports neutral amino acids and sodium ions from the extracellular to the intracellular side of the cell membrane (PubMed: [11342143](http://www.uniprot.org/citations/11342143), PubMed: [19015196](http://www.uniprot.org/citations/19015196), PubMed: [33928121](http://www.uniprot.org/citations/33928121)). The transport is electrogenic, pH dependent and partially tolerates substitution of Na(+) by Li(+) (PubMed: [11414754](http://www.uniprot.org/citations/11414754)). Preferentially transports smaller amino acids, such as glycine, L-alanine, L-serine, L-asparagine and L-threonine, followed by L-cysteine, L-histidine, L-proline and L-glutamine and L-methionine (PubMed: [11414754](http://www.uniprot.org/citations/11414754), PubMed: [33928121](http://www.uniprot.org/citations/33928121)).

**Cellular Location**

Cell membrane; Multi-pass membrane protein. Cell projection, microvillus membrane; Multi-pass membrane protein Note=Microvillus membrane localization in placenta

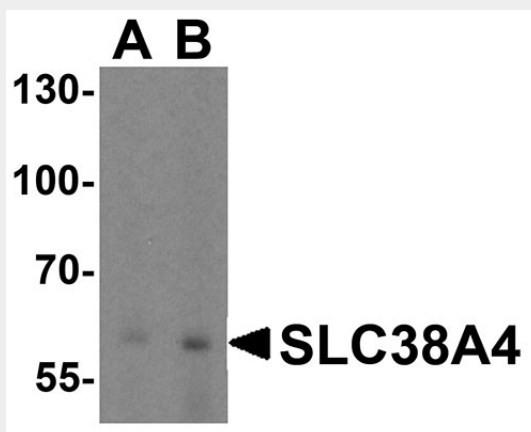
**Tissue Location**

Expressed almost exclusively in embryonic and adult liver, and at lower levels in the kidney (PubMed:11342143, PubMed:11414754). Expressed at lower levels in adult muscle and pancreas (PubMed:11414754). Detected in fetal blood vessels (PubMed:16148032). Expressed in syncytiotrophoblasts of placenta during first trimester and at term (PubMed:19015196, PubMed:16148032). Highly expressed in first trimester placenta compared to term placenta (PubMed:19015196).

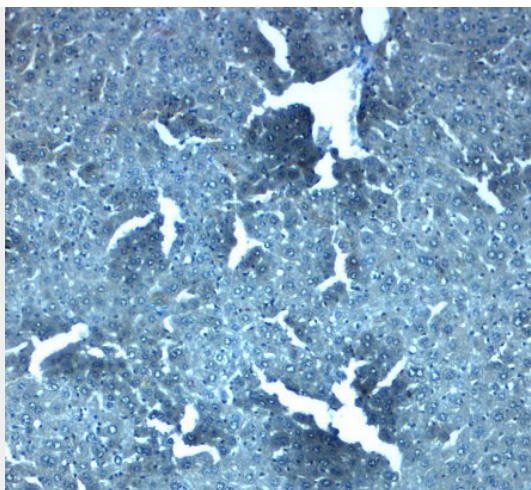
**SLC38A4 Antibody - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**SLC38A4 Antibody - Images**

Western blot analysis of SLC38A4 in mouse kidney tissue lysate with SLC38A4 antibody at (A) 1 and (B) 2  $\mu$ g/ml.



Immunohistochemistry of SLC38A4 in mouse liver tissue with SLC38A4 antibody at 2.5  $\mu$ g/mL.

#### **SLC38A4 Antibody - Background**

SLC38A4 is found predominantly in liver and transports both cationic and neutral amino acids (1,2). The transport of cationic amino acids by SLC38A4 is sodium and pH independent, while the transport of neutral amino acids is sodium and pH dependent (2). Recent evidence suggests that SLC38A4 functions as a regulator of protein synthesis downstream of the hepatocyte nuclear factor 4a during liver development (3). It has also been suggested that SLC38A4 has ATPase activity and is critically involved in the maintenance of mitochondrial homeostasis and cell survival (4).

#### **SLC38A4 Antibody - References**

Sugawara M, Nakanishi T, Fei YJ, et al. Structure and function of ATA3, a new subtype of amino acid transport system A, primarily expressed in the liver and skeletal system. *Biochim. Biophys. Acta* 2000; 1509:7-13.

Hatanaka T, Huang W, Ling R, et al. Evidence for the transport of neutral as well as cationic amino acids by ATA3, a novel and liver-specific subtype of amino acid transport system A. *Biochim. Biophys. Acta* 2001 1510:10-7.

Kondou H, Kawai M, Tachikawa K, et al. Sodium-coupled neutral amino acid transporter 4 functions as a regulator of protein synthesis during liver development. *Hepatol. Res.* 2013; 43:1211-23.

Yang X, Yang J, Li L, et al. PAAT, a novel ATPase and trans-regulator of mitochondrial ABC transporters, is critically involved in the maintenance of mitochondrial homeostasis. *FASEB J.* 2014; 28:4821-34.