

**Anti-SLC6A4 Antibody**  
**Catalog # ABO12747****Specification**

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**Anti-SLC6A4 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">P31645</a>
Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Format	Lyophilized

**Description**

Rabbit IgG polyclonal antibody for Sodium-dependent serotonin transporter (SLC6A4) detection. Tested with WB in Human;Mouse.

**Reconstitution**

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

**Anti-SLC6A4 Antibody - Additional Information**

**Gene ID** 6532

**Other Names**

Sodium-dependent serotonin transporter, SERT, 5HT transporter, 5HTT, Solute carrier family 6 member 4, SLC6A4, HTT, SERT

**Calculated MW**

70325 MW KDa

**Application Details**

Western blot, 0.1-0.5 µg/ml, Human, Mouse<br>

**Subcellular Localization**

Cell membrane; Multi-pass membrane protein. Endomembrane system; Multi-pass membrane protein. Endosome membrane; Multi-pass membrane protein. Translocates from intracellular locations to the plasma membrane. Density of transporter molecules on the plasma membrane is itself regulated by serotonin.

**Tissue Specificity**

Expressed in platelets (at protein level). .

**Protein Name**

Sodium-dependent serotonin transporter

**Contents**

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na<sub>2</sub>HPO<sub>4</sub>, 0.05mg Na<sub>3</sub>.

**Immunogen**

A synthetic peptide corresponding to a sequence at the N-terminus of human SLC6A4 (57-85aa

DDTRHSIPATTTTLVAELHQGERETWGKK), different from the related mouse and rat sequences by six amino acids.

#### **Purification**

Immunogen affinity purified.

#### **Cross Reactivity**

No cross reactivity with other proteins

#### **Storage**

**At -20°C for one year. After reconstitution, 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.**

#### **Sequence Similarities**

Belongs to the sodium:neurotransmitter symporter (SNF) (TC 2.A.22) family. SLC6A4 subfamily.

### **Anti-SLC6A4 Antibody - Protein Information**

**Name** SLC6A4

**Synonyms** HTT, SERT

#### **Function**

Serotonin transporter that cotransports serotonin with one Na<sup>(+)</sup> ion in exchange for one K<sup>(+)</sup> ion and possibly one proton in an overall electroneutral transport cycle. Transports serotonin across the plasma membrane from the extracellular compartment to the cytosol thus limiting serotonin intercellular signaling (PubMed: <a href="http://www.uniprot.org/citations/27756841" target="\_blank">27756841</a>, PubMed: <a href="http://www.uniprot.org/citations/34851672" target="\_blank">34851672</a>, PubMed: <a href="http://www.uniprot.org/citations/21730057" target="\_blank">21730057</a>, PubMed: <a href="http://www.uniprot.org/citations/10407194" target="\_blank">10407194</a>, PubMed: <a href="http://www.uniprot.org/citations/27049939" target="\_blank">27049939</a>, PubMed: <a href="http://www.uniprot.org/citations/12869649" target="\_blank">12869649</a>). Essential for serotonin homeostasis in the central nervous system. In the developing somatosensory cortex, acts in glutamatergic neurons to control serotonin uptake and its trophic functions accounting for proper spatial organization of cortical neurons and elaboration of sensory circuits. In the mature cortex, acts primarily in brainstem raphe neurons to mediate serotonin uptake from the synaptic cleft back into the pre-synaptic terminal thus terminating serotonin signaling at the synapse (By similarity). Modulates mucosal serotonin levels in the gastrointestinal tract through uptake and clearance of serotonin in enterocytes. Required for enteric neurogenesis and gastrointestinal reflexes (By similarity). Regulates blood serotonin levels by ensuring rapid high affinity uptake of serotonin from plasma to platelets, where it is further stored in dense granules via vesicular monoamine transporters and then released upon stimulation (PubMed: <a href="http://www.uniprot.org/citations/17506858" target="\_blank">17506858</a>, PubMed: <a href="http://www.uniprot.org/citations/18317590" target="\_blank">18317590</a>). Mechanistically, the transport cycle starts with an outward-open conformation having Na<sup>1</sup>(+) and Cl<sup>(-)</sup> sites occupied. The binding of a second extracellular Na<sup>2</sup>(+) ion and serotonin substrate leads to structural changes to outward-occluded to inward-occluded to inward-open, where the Na<sup>2</sup>(+) ion and serotonin are released into the cytosol. Binding of intracellular K<sup>(+)</sup> ion induces conformational transitions to inward-occluded to outward-open and completes the cycle by releasing K<sup>(+)</sup> possibly together with a proton bound to Asp-98 into the extracellular compartment. Na<sup>1</sup>(+) and Cl<sup>(-)</sup> ions remain bound throughout the transport cycle (PubMed: <a href="http://www.uniprot.org/citations/27756841" target="\_blank">27756841</a>, PubMed: <a href="http://www.uniprot.org/citations/34851672" target="\_blank">34851672</a>, PubMed: <a href="http://www.uniprot.org/citations/21730057" target="\_blank">21730057</a>).

target="\_blank">21730057</a>, PubMed:<a href="http://www.uniprot.org/citations/10407194" target="\_blank">10407194</a>, PubMed:<a href="http://www.uniprot.org/citations/27049939" target="\_blank">27049939</a>, PubMed:<a href="http://www.uniprot.org/citations/12869649" target="\_blank">12869649</a>). Additionally, displays serotonin- induced channel-like conductance for monovalent cations, mainly Na(+) ions. The channel activity is uncoupled from the transport cycle and may contribute to the membrane resting potential or excitability (By similarity).

#### Cellular Location

Cell membrane; Multi-pass membrane protein. Endomembrane system; Multi-pass membrane protein. Endosome membrane; Multi- pass membrane protein. Synapse {ECO:0000250|UniProtKB:Q60857}. Cell junction, focal adhesion {ECO:0000250|UniProtKB:Q60857}. Cell projection, neuron projection {ECO:0000250|UniProtKB:Q60857}. Note=Could be part of recycling endosomes (PubMed:16870614). Density of transporter molecules on the plasma membrane is itself regulated by STX1A (By similarity). Density of transporter molecules on the plasma membrane is also regulated by serotonin (PubMed:17506858). Density of transporter molecules seems to be modulated by ITGAV:ITGB3 (By similarity) {ECO:0000250|UniProtKB:P31652, ECO:0000250|UniProtKB:Q60857, ECO:0000269|PubMed:16870614, ECO:0000269|PubMed:17506858}

#### Tissue Location

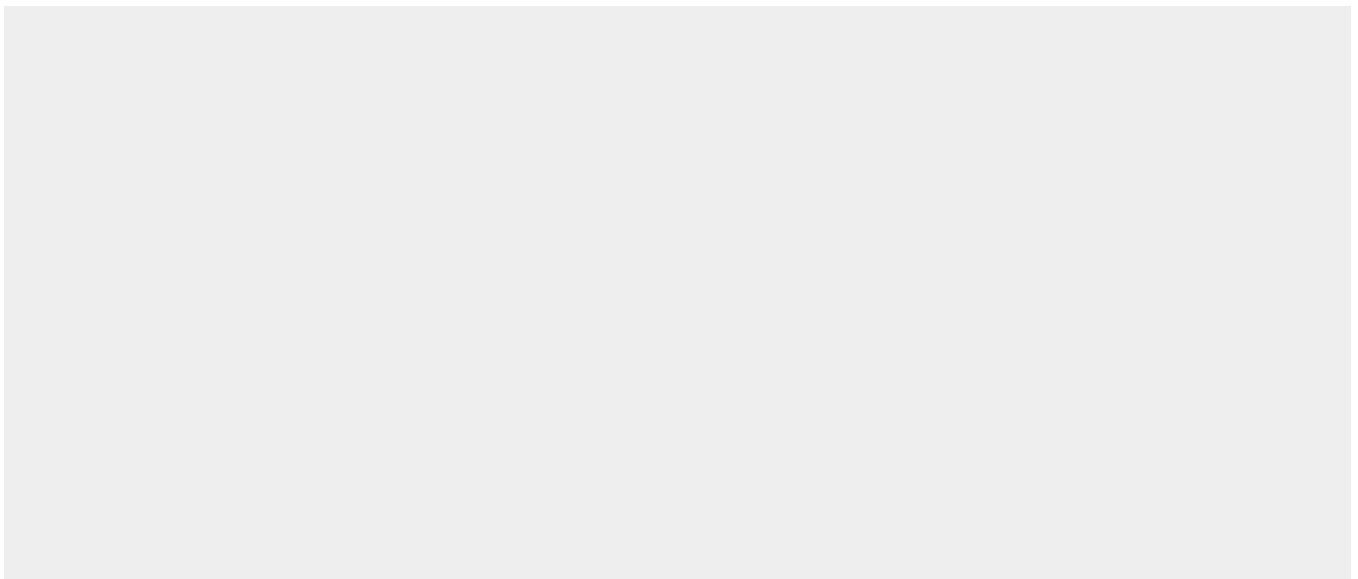
Expressed in platelets (at protein level).

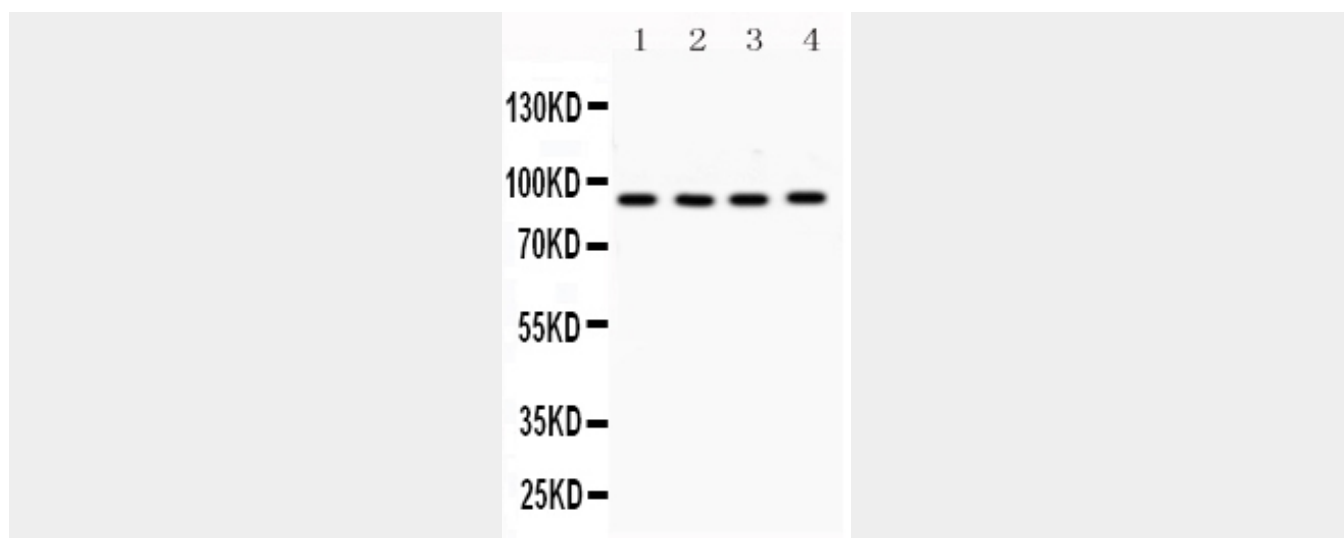
### Anti-SLC6A4 Antibody - Protocols

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](#)

### Anti-SLC6A4 Antibody - Images





Anti- SLC6A4 antibody, ABO12747, Western blottingAll lanes: Anti SLC6A4 (ABO12747) at 0.5ug/ml  
Lane 1: HELA Whole Cell Lysate at 40ug  
Lane 2: U87 Whole Cell Lysate at 40ug  
Lane 3: A549 Whole Cell Lysate at 40ug  
Lane 4: NEURO Whole Cell Lysate at 40ug  
Predicted bind size: 70KD  
Observed bind size: 90KD

#### Anti-SLC6A4 Antibody - Background

SLC6A4 (Solute carrier family 6, member 4), also known as SERT(serotonin transporter), is a monoamine transporter protein. The SLC6A4 gene spans 31 kb and contains 14 exons. This protein integral membrane protein transports the neurotransmitter serotonin from synaptic spaces into presynaptic neurons. This transport of serotonin by the SERT protein terminates the action of serotonin and recycles it in a sodium-dependent manner. This protein is the target of many antidepressant medications, including those of the SSRI class. It is a member of the sodium: neurotransmitter symporter family. A repeat length polymorphism in the promoter of this gene has been shown to affect the rate of serotonin uptake and may play a role in sudden infant death syndrome, aggressive behavior in Alzheimer disease patients, post-traumatic stress disorder and depression-susceptibility in people experiencing emotional trauma.