

Anti-SLC6A1 Antibody

Catalog # ABO13044

Product Information

Application	WB
Primary Accession	P30531
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Sodium- and chloride-dependent GABA transporter 1 (SLC6A1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	6529
Other Names	Sodium- and chloride-dependent GABA transporter 1, GAT-1, Solute carrier family 6 member 1, SLC6A1, GABATR, GABT1, GAT1
Calculated MW	67074
Application Details	Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human
Subcellular Localization	Cell membrane; Multi-pass membrane protein. Membrane; Multi-pass membrane protein. Localized at the plasma membrane and in a subset of intracellular vesicles. Localized at the presynaptic terminals of interneurons (By similarity). .
Source	Eukaryota
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 N-terminus of human SLC6A1 (23-54aa ANDKPKTLVVKVQKKAADLPDRDTWKGKRFDFL), different from the related mouse and rat sequences by two 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.

Protein Information

Name	SLC6A1
Synonyms	GABATR, GABT1, GAT1
Function	Mediates transport of gamma-aminobutyric acid (GABA) together with sodium and chloride and is responsible for the reuptake of GABA from the synapse (PubMed: 30132828). The translocation of GABA, however, may also occur in the reverse direction leading to the release of GABA (By similarity). The direction and magnitude of GABA transport is a consequence of the prevailing thermodynamic conditions, determined by membrane potential and the intracellular and extracellular concentrations of Na(+), Cl(-) and GABA (By similarity). Can also mediate sodium- and chloride-dependent transport of hypotaurine but to a much lower extent as compared to GABA (By similarity).
Cellular Location	Cell membrane {ECO:0000250 UniProtKB:P23978}; Multi-pass membrane protein. Presynapse {ECO:0000250 UniProtKB:P31648}. Note=Localized at the presynaptic terminals of interneurons. {ECO:0000250 UniProtKB:P31648}

Background

GABA transporter 1 (GAT1), also known as sodium- and chloride-dependent GABA transporter 1, is a protein that in humans is encoded by the SLC6A1 gene. GABA Transporter 1 uses Na⁺ and Cl⁻ to create a gradient, which removes or adds GABA to extracellular spaces in the cerebrum and cerebellum. The stoichiometry for GABA Transporter 1 is 2 Na⁺: 1 Cl⁻: 1 GABA. The activity of GAT1 is largely dependent on the presence of Na⁺, while Cl⁻ assists by increasing the ability for GAT-1 to uptake GABA.

Images

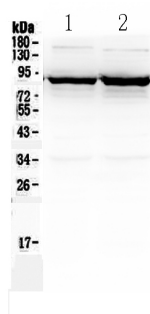


Figure 1. Western blot analysis of SLC6A1 using anti-SLC6A1 antibody (ABO13044).

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