

Datasheet for ABIN7581967

anti-SLC10A4 antibody (Extracellular)



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Overview

Quantity:	50 µL
Target:	SLC10A4
Binding Specificity:	AA 92-104, Extracellular
Reactivity:	Rat
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SLC10A4 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Live Cell Imaging (LCI), Flow Cytometry (FACS)

Product Details

Purpose:	A Rabbit Polyclonal antibody to SLC10A4 (extracellular)
Immunogen:	(C)HEPPFWDTPLNHG, corresponding to amino acid residues 92 - 104 of rat SLC10A4
Sequence:	(C)HEPPFWDTPL NHG
Isotype:	IgG
Specificity:	Extracellular, N-terminus.
Predicted Reactivity:	Mouse - identical Human - 10 out of 13 amino acid identical
Characteristics:	Anti-SLC10A4 (extracellular) Antibody (ABIN7581967) is a highly specific antibody directed against an extracellular epitope of the rat protein. The antibody can be used in western blot, immunohistochemistry and flow cytometry applications. It has been designed to recognize

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SLC10A4 from mouse, rat and human samples.

Purification: Affinity purified on immobilized antigen.

Target Details

Target: SLC10A4

Alternative Name: SLC10A4 ([SLC10A4 Products](#))

Background: Sodium/Bile Acid Cotransporter 4, P4, Solute Carrier Family 10 Member 4, SLC10A4, also known as Sodium/bile acid cotransporter 4, is a member of the SLC10 (Solute Carrier Family 10) family of transporters. The family is primarily involved in the transport of bile acids, sulfated solutes, and other substrates across cellular membranes. The members of the family play crucial roles in bile acid homeostasis and cholesterol metabolism, among other functions, and include seven members: SLC10A1 to SLC10A7.¹ The SLC10 family was referred to as the "sodium/bile acid co-transporter family" based on the identified function of its two founding members SLC10A1 and SLC10A2, while SLC10A6 was later identified as a transporter for sulfated steroid conjugates and other organic anions. The remaining four members of the SLC10 family, revealed no transport activity for bile acids or sulfated steroid hormones at all, and therefore, these carriers are still classified as orphan transporters. ¹⁻² SLC10A4 is a unique member of the SLC10 with functions distinct from the primary bile acid transport roles of its relatives. In fact, SLC10A4 primary function appears to be in the central nervous system (CNS), where it has a role in modulating neurotransmission.^{1, 3-5} SLC10A4 is expressed in various neuronal populations within the CNS. It is found in cholinergic neurons (which release acetylcholine) and monoaminergic neurons (which release neurotransmitters like dopamine, norepinephrine, and serotonin), in regions such as the basal ganglia, hippocampus, substantia nigra, and spinal cord. These areas are critical for motor control, memory, and reward processing.³⁻⁵ SLC10A4 knockout mice often exhibit altered neurotransmission, particularly in cholinergic and dopaminergic systems, which can affect behavior and neurological function. SLC10A4 knockout mice have shown reduced dopamine levels in the striatum, and reduced acetylcholine content in the hippocampus and brainstem. They have also been shown to be hypersensitive to psychostimulants such as amphetamine and the monoamine oxidase inhibitor tranylcypromine, suggesting that SLC10A4 protein influence storage, release and/or uptake of monoamines by other transporters. ³⁻⁵ Given its role in cholinergic and dopaminergic systems, SLC10A4 is of interest in researching neurological and psychiatric disorders such as Parkinson's disease, schizophrenia, and depression. Interestingly, recent studies have revealed the expression of SLC10A4 in mast cells. Mast cells are immune cells involved in allergic

Target Details

responses, inflammation, and immune defense. They release histamine and other mediators upon activation, contributing to immediate hypersensitivity reactions and chronic inflammatory conditions. Indeed, SLC10A4 deficient mast cells showed impaired cell degranulation and mediator release, suggesting that SLC10A4 modulation can be significant in conditions such as allergic reactions, asthma, and other inflammatory diseases where mast cells are key players.⁵

Gene ID:	305309
UniProt:	Q5PT56

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:300 Application Dilutions Western blot wb: 1:200
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Restrictions:	For Research Use only
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Handling

Format:	Lyophilized
Reconstitution:	0.2 mL double distilled water (DDW).
Concentration:	1 mg/mL
Buffer:	PBS pH 7.4
Storage:	4 °C,-20 °C
Storage Comment:	Storage before reconstitution: The antibody ships as a lyophilized powder at room temperature. Upon arrival, it should be stored at -20°C. Storage after reconstitution: The reconstituted solution can be stored at 4°C for up to 1 week. For longer periods, small aliquots should be stored at -20°C. Avoid multiple freezing and thawing. Centrifuge all antibody preparations before use (10000 x g 5 min).