

Datasheet for ABIN7581974

anti-SLC25A22 antibody (Intracellular)



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Overview

Quantity:	50 µL
Target:	SLC25A22
Binding Specificity:	AA 91-106, Intracellular
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This SLC25A22 antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC)

Product Details

Purpose:	A Rabbit Polyclonal antibody to SLC25A22 (GC1)
Immunogen:	(C)RHQLSKDGQKLTLLKE, corresponding to amino acid residues 91 - 106 of human SLC25A22
Sequence:	(C)RHQLSKDGQK LTLLKE
Isotype:	IgG
Specificity:	Intracellular, 1st loop
Predicted Reactivity:	Rat,mouse - 15 out of 16 amino acid residues identical
Characteristics:	Anti-SLC25A22 (GC1) Antibody (ABIN7581974) is a highly specific antibody directed against an epitope of the human protein. The antibody can be used in western blot and immunohistochemistry applications. It has been designed to recognize SLC25A22 from rat, mouse and human samples.

Product Details

Purification: Affinity purified on immobilized antigen.

Target Details

Target: SLC25A22

Alternative Name: SLC25A22 ([SLC25A22 Products](#))

Background: Mitochondrial glutamate carrier 1, Glutamate/H(+) Symporter 1, Solute carrier family 25 member 22, SLC25A22- solute carrier family 25 member 22, also known as Mitochondrial glutamate carrier 1 (GC1), is a mitochondrial glutamate/H⁺ symporter, responsible for the transport of glutamate from the cytosol into the mitochondrial matrix with the concomitant import of a proton¹. SLC25A22 mutations has been associate with colorectal cancer, osteosarcoma and neonatal myoclonic epilepsy². SLC25A22 was shown to be expressed in different tissues, especially in the brain, liver, and pancreas. The mitochondrial carriers are a family of transport proteins in the inner membranes of mitochondria. They shuttle substrates, metabolites, and cofactors through this membrane and connect cytoplasm functions with others in the matrix. SLC25 is a large family of nuclear-encoded transporters embedded in the inner mitochondrial membrane and in a few cases other organelle membranes. The two isoforms of the glutamate carrier GC1 and GC2 (encoded by SLC25A22 and SLC25A18, respectively) catalyze the transport of glutamate across the inner mitochondrial membrane, either by proton (H⁺) co-transport or in exchange for hydroxyl ions³ (OH⁻). SLC25A22 has a tumor-promoting function, promoting proliferation and migration of colorectal cancer cells with mutant KRAS, and formation and metastasis of colorectal cancer xenograft tumors in mice. Patients with colorectal tumors that express increased levels of SLC25A22 have shorter survival times than patients whose tumors have lower levels. SLC25A22 induces intracellular synthesis of aspartate, activation of mitogen-activated protein kinase and extracellular signal-regulated kinase signaling and reduces oxidative stress⁴. SLC25A22 has been identified as the underlying cause of early myoclonic encephalopathy (EME) an electro-clinical epilepsy syndrome that manifests itself within the neonatal period or within the first 3 months of life. Genetic mapping of an autosomal recessive form of this condition to chromosome 11p15.5 and the identification of a missense mutation (p.Pro206Leu) in the gene encoding SLC25A22. The mutation cosegregated with the disease and altered a highly conserved amino acid, resulting in severe neonatal epilepsies with suppression-burst pattern³.

Gene ID: 79751

UniProt: [Q9H936](#)

Pathways: [Dicarboxylic Acid Transport](#)

Application Details

Application Notes:	Antigen preadsorption control: 1 µg peptide per 1 µg antibody Application Dilutions Immunohistochemistry paraffin embedded sections ihc: 1:600 Application Dilutions Western blot wb: 1:200-1:500
Restrictions:	For Research Use only

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).