

For Research Use Only

SLC25A45 Polyclonal antibody, PBS Only

Catalog Number: 14160-1-PBS



Basic Information

Catalog Number: 14160-1-PBS	GenBank Accession Number: BC041100	Purification Method: Antigen affinity purification
Size: 100ug, Concentration: 1 mg/ml by Nanodrop;	GeneID (NCBI): 283130	
Source: Rabbit	UNIPROT ID: Q8N413	
Isotype: IgG	Full Name: solute carrier family 25, member 45	
Immunogen Catalog Number: AG5342	Calculated MW: 335 aa, 36 kDa	
	Observed MW: 32 kDa	

Applications

Tested Applications:
WB, IF/ICC, Indirect ELISA

Species Specificity:
human, mouse, rat

Background Information

SLC25A45 (solute carrier family 25 member 45) is a mitochondrial inner membrane transporter recently identified as essential for the import of methylated amino acids. Dias et al. (2025, Molecular Cell) demonstrated that SLC25A45 specifically mediates the mitochondrial uptake of dimethylarginine and trimethyllysine, but not their unmethylated counterparts. This selective transport enables mitochondria to metabolize trimethyllysine for de novo carnitine biosynthesis, linking SLC25A45 activity to fatty acid oxidation and methylated amino acid homeostasis. A naturally occurring human variant, R285C, enhances SLC25A45 stability by disrupting m-AAA protease-dependent degradation and is associated with altered plasma levels of methylated amino acids and deoxycarnitine. Functionally, SLC25A45 defines a key metabolic node coordinating methylated amino acid turnover, carnitine synthesis, and mitochondrial signaling, implicating it in cardiovascular, renal, and metabolic pathophysiology. (PMID: 41075794)

Storage

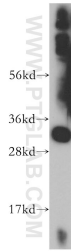
Storage:
Store at -80°C.

Storage Buffer:
PBS only, pH7.3

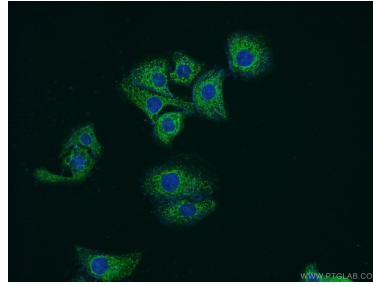
For technical support and original validation data for this product please contact:
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Selected Validation Data



mouse skeletal muscle tissue were subjected to SDS PAGE followed by western blot with 14160-1-AP (SLC25A45 antibody) at dilution of 1:400 incubated at room temperature for 1.5 hours. This data was developed using the same antibody clone with 14160-1-PBS in a different storage buffer formulation.



Immunofluorescent analysis of SH-SY5Y cells using 14160-1-AP (SLC25A45 antibody) at dilution of 1:50 and Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L). This data was developed using the same antibody clone with 14160-1-PBS in a different storage buffer formulation.