Human SLC25A28 Alexa Fluor® 532-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 1117503

Catalog Number: FAB11774X

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects a synthetic peptide specific for human SLC25A28 around amino acid 250 in Direct ELISA.
Source	Monoclonal Mouse IgG_{2B} Clone # 1117503
Purification	Protein A or G purified
Immunogen	Synthetic Peptide Accession # Q96A46
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.

DATA

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Solute carrier 25 member 28 (SLC25A28) is a mitochondrial carrier protein, categorized within the solute carrier family. This protein plays an essential role in mitochondrial iron transport and homeostasis, which is crucial for maintaining oxidative phosphorylation and overall cellular energy metabolism. SLC25A28 is predominantly involved in iron export from mitochondria to the cytosol, facilitating optimal levels of iron-sulfur cluster formation and heme biosynthesis. The dysfunction or dysregulation of SLC25A28 can lead to significant cellular disturbances, including oxidative stress and impaired mitochondrial function, both of which have been linked to neurodegenerative diseases and other metabolic disorders. Moreover, mutations in the SLC25A28 gene have been implicated in diseases like sideroblastic anemia and mitochondrial iron-loading disorders, demonstrating its central role in systemic iron regulation. Given its critical functions in cellular metabolism and iron homeostasis, SLC25A28 has emerged as a promising biomarker for metabolic and mitochondrial pathologies, with potential therapeutic implications in iron-related disease management.

References:

1. Kunji ERS, King MS, Ruprecht JJ, Thangaratnarajah C. The SLC25 Carrier Family: Important Transport Proteins in Mitochondrial Physiology and Pathology. Physiology (Bethesda). 2020 Sep 1;35(5):302-327. doi: 10.1152/physiol.00009.2020. PMID: 32783608; PMCID: PMC7611780.2.
2. Guan H, Xiao L, Hao K, Zhang Q, Wu D, Geng Z, Duan B, Dai H, Xu R, Feng X. SLC25A28 Overexpression Promotes Adipogenesis by Reducing ATGL. J Diabetes Res. 2024 May 4;2024:5511454. doi: 10.1155/2024/5511454. PMID: 38736904; PMCID: PMC11088465.

PRODUCT SPECIFIC NOTICES

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