

**DESCRIPTION**

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects a synthetic peptide specific for human SLC25A28 around amino acid 250 in Direct ELISA.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 1117503
<b>Purification</b>	Protein A or G purified
<b>Immunogen</b>	Synthetic Peptide Accession # Q96A46
<b>Conjugate</b>	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
<b>Formulation</b>	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**

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.