SANTA CRUZ BIOTECHNOLOGY, INC.

SLC25A11 (E-2): sc-515593

BACKGROUND

Inner membrane mitochondrial proteins are responsible for the transport of metabolites across the mitochondrial membrane. SLC25A11 (solute carrier family 25 member 11), also known as Mitochondrial 2-oxoglutarate/malate carrier protein, is a 314 amino acid multi-pass transmembrane protein belonging to the mitochondrial carrier protein family. As an oxoglutarate/malate carrier, SLC25A11 transports 2-oxoglutarate across the inner mitochondrial membrane in an electroneutral exchange for dicarboxylic acids and malate. SLC25A11 also participates in other important metabolic processes, such as the oxoglutarate/isocitrate shuttle and the malate-aspartate shuttle, as well as in nitrogen metabolism and in gluconeogenesis from lactate. SLC25A11 contains three solcar repeats, which is typical of substrate carrier proteins involved in energy transfer.

REFERENCES

1. Aquila, H., et al. 1987. Solute carriers involved in energy transfer of mitochondria form a homologous protein family. FEBS Lett. 212: 1-9.
2. Iacobazzi, V., et al. 1992. Sequences of the human and bovine genes for the mitochondrial 2-oxoglutarate carrier. DNA Seq. 3: 79-88.
3. Kuan, J. and Saier, M.H. 1993. The mitochondrial carrier family of transport proteins: structural, functional, and evolutionary relationships. Crit. Rev. Biochem. Mol. Biol. 28: 209-233.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A11 (human) mapping to 17p13.2; Slc25a11 (mouse) mapping to 11 B3.

SOURCE

SLC25A11 (E-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 142-159 within an internal region of SLC25A11 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SLC25A11 (E-2) is available conjugated to agarose (sc-515593 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515593 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515593 PE), fluorescein (sc-515593 FITC), Alexa Fluor® 488 (sc-515593 AF488), Alexa Fluor® 546 (sc-515593 AF546), Alexa Fluor® 594 (sc-515593 AF594) or Alexa Fluor® 647 (sc-515593 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515593 AF680) or Alexa Fluor® 790 (sc-515593 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515593 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

SLC25A11 (E-2) is recommended for detection of SLC25A11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

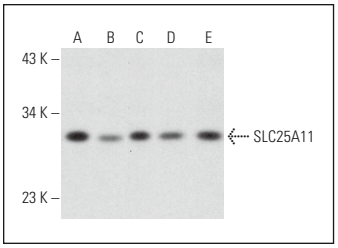
Suitable for use as control antibody for SLC25A11 siRNA (h): sc-94049, SLC25A11 siRNA (m): sc-153500, SLC25A11 shRNA Plasmid (h): sc-94049-SH, SLC25A11 shRNA Plasmid (m): sc-153500-SH, SLC25A11 shRNA (h) Lentiviral Particles: sc-94049-V and SLC25A11 shRNA (m) Lentiviral Particles: sc-153500-V.

Molecular Weight (predicted) of SLC25A11: 34 kDa.

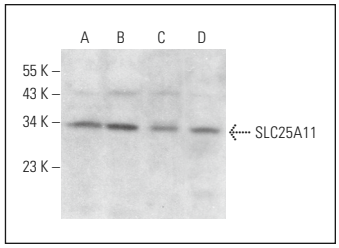
Molecular Weight (observed) of SLC25A11: 20 kDa.

Positive Controls: EOC 20 whole cell lysate: sc-364187, HeLa whole cell lysate: sc-2200 or C2C12 whole cell lysate: sc-364188.

DATA



SLC25A11 (E-2): sc-515593. Western blot analysis of SLC25A11 expression in EOC 20 (**A**), MM-142 (**B**), C2C12 (**C**), WEHI-231 (**D**) and JC (**E**) whole cell lysates.



SLC25A11 (E-2): sc-515593. Western blot analysis of SLC25A11 expression in HeLa (**A**), CCRF-CEM (**B**), BYDP (**C**) and TK-1 (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Xu, J., et al. 2020. Ischemic neuroprotectant PKCε restores mitochondrial glutamate oxaloacetate transaminase in the neuronal NADH shuttle after ischemic injury. Transl. Stroke Res. 11: 418-432.
2. Ta, N., et al. 2022. Mitochondrial outer membrane protein FUNDC2 promotes ferroptosis and contributes to doxorubicin-induced cardiomyopathy. Proc. Natl. Acad. Sci. USA 119: e2117396119.
3. Adriaenssens, E., et al. 2023. Small heat shock proteins operate as molecular chaperones in the mitochondrial intermembrane space. Nat. Cell Biol. 25: 467-480.
4. Žuna, K., et al. 2024. The 2-oxoglutarate/malate carrier extends the family of mitochondrial carriers capable of fatty acid and 2,4-dinitrophenol-activated proton transport. Acta Physiol. 240: e14143.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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