SANTA CRUZ BIOTECHNOLOGY, INC.

SLC25A46 (G-2): sc-515823

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SLC25A46 (solute carrier family 25 member 46) is a 418 amino acid multi-pass membrane protein that belongs to the the SLC25 family of mitochondrial carriers that are responsible for transporting metabolites across the inner mitochondrial membrane. Expressed in a variety of tissues, SLC25A46 contains two Solcar repeats and localizes to the mitochondrion inner membrane. The human gene encoding SLC25A46 localizes to chromosome 5. With 181 million base pairs encoding around 1,000 genes, chromosome 5 is about 6% of human genomic DNA. Chromosome 5 is associated with Cockayne syndrome through the ERCC8 gene and familial adenomatous polyposis through the adenomatous polyposis coli (APC) tumor suppressor gene. Treacher Collins syndrome is also chromosome 5 associated and is caused by insertions or deletions within the TCOF1 gene. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome. Deletion of 5q or chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

1. Dixon, M.J., et al. 1991. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. Am. J. Hum. Genet. 49: 17-22.
2. Saltman, D.L., et al. 1993. A physical map of 15 loci on human chromosome 5q23-q33 by two-color fluorescence *in situ* hybridization. Genomics 16: 726-732.
3. Kadmon, M., et al. 2001. Duodenal adenomatosis in familial adenomatous polyposis coli. A review of the literature and results from the Heidelberg Polyposis Register. Int. J. Colorectal Dis. 16: 63-75.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610826. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. South, S.T., et al. 2006. A new genomic mechanism leading to cri-du-chat syndrome. Am. J. Med. Genet. A 140: 2714-2720.

CHROMOSOMAL LOCATION

Genetic locus: SLC25A46 (human) mapping to 5q22.1; Slc25a46 (mouse) mapping to 18 B1.

SOURCE

SLC25A46 (G-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-17 at the N-terminus of SLC25A46 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

SLC25A46 (G-2) is recommended for detection of SLC25A46 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 SLC25A46 siRNA (h): sc-91886, SLC25A46 siRNA (m): sc-153522, SLC25A46 shRNA Plasmid (h): sc-91886-SH, SLC25A46 shRNA Plasmid (m): sc-153522-SH, SLC25A46 shRNA (h) Lentiviral Particles: sc-91886-V and SLC25A46 shRNA (m) Lentiviral Particles: sc-153522-V.

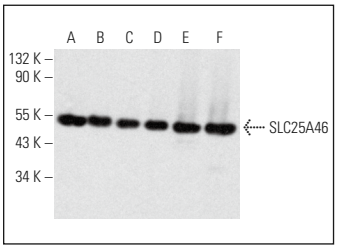
Molecular Weight of SLC25A46: 46 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, MCF7 whole cell lysate: sc-2206 or HL-60 whole cell lysate: sc-2209.

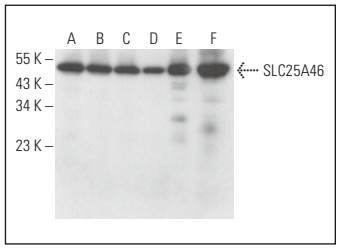
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



SLC25A46 (G-2): sc-515823. Western blot analysis of SLC25A46 expression in Jurkat (**A**), MCF7 (**B**), HL-60 (**C**), HeLa (**D**), NCI-H929 (**E**) and SHP-77 (**F**) whole cell lysates.



SLC25A46 (G-2): sc-515823. Western blot analysis of SLC25A46 expression in NCI-H929 (**A**), A549 (**B**), Daudi (**C**) and Neuro-2A (**D**) whole cell lysates and human rectum (**E**) and mouse brain (**F**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Schuettpelz, J., et al. 2023. The role of the mitochondrial outer membrane protein SLC25A46 in mitochondrial fission and fusion. Life Sci. Alliance 6: e202301914.

RESEARCH USE

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