

SLC25A46 (E-13): sc-132096

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

- Dixon, M.J., et al. The gene for Treacher Collins syndrome maps to the long arm of chromosome 5. *Am. J. Hum. Genet.* 49: 17-22.
- 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.
- 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.
- 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/>
- South, S.T., et al. 2006. A new genomic mechanism leading to cri-du-chat syndrome. *Am. J. Med. Genet. A* 140: 2714-2720.
- Haitina, T., et al. 2006. Fourteen novel human members of mitochondrial solute carrier family 25 (SLC25) widely expressed in the central nervous system. *Genomics* 88: 779-790.
- Aretz, S., et al. 2007. Somatic APC mosaicism: a frequent cause of familial adenomatous polyposis (FAP). *Hum. Mutat.* 28: 985-992.
- Cleaver, J.E., et al. 2007. Cockayne syndrome exhibits dysregulation of p21 and other gene products that may be independent of transcription-coupled repair. *Neuroscience* 145: 1300-1308.
- Du, H.Y., et al. 2007. Telomerase reverse transcriptase haploinsufficiency and telomere length in individuals with 5p-syndrome. *Aging Cell* 6: 689-697.

CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

SLC25A46 (E-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SLC25A46 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132096 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SLC25A46 (E-13) is recommended for detection of SLC25A46 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with other SLC25A family members.

SLC25A46 (E-13) is also recommended for detection of SLC25A46 in additional species, including equine, canine, porcine and avian.

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.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker[™] Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.