

SUCLG2 (A-15): sc-99646

BACKGROUND

SUCLG2 (succinate-CoA ligase, GDP-forming, β subunit), also known as G-BETA, succinyl-CoA ligase [GDP-forming] subunit β , mitochondrial, GTP-specific succinyl-CoA synthetase subunit β , succinyl-CoA synthetase β -G chain or SCS- β G, is a 432 amino acid protein belonging to the succinate/malate CoA ligase β subunit family. SUCLG2 is widely expressed, localizes to mitochondria and contains one ATP-grasp domain. SUCLG2 dimerizes with SUCLG1 (succinyl-CoA synthetase) to form G-SCS, a GTP specific enzyme. SUCLG2 has an active role in the tricarboxylic acid cycle of carbohydrate metabolism by catalyzing the reaction of GTP, succinate and CoA to form GDP, a phosphate and succinyl-CoA. The gene encoding SUCLG2 maps to human chromosome 3p14.1.

REFERENCES

- Johnson, J.D., et al. 1998. Genetic evidence for the expression of ATP- and GTP-specific succinyl-CoA synthetases in multicellular eucaryotes. *J. Biol. Chem.* 273: 27580-27586.
- Schiaffino, M.V., et al. 1999. Ocular albinism: evidence for a defect in an intracellular signal transduction system. *Nat. Genet.* 23: 108-112.
- Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 603922. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Fraser, M.E., et al. 2000. Phosphorylated and dephosphorylated structures of pig heart, GTP-specific succinyl-CoA synthetase. *J. Mol. Biol.* 299: 1325-1339.
- Kowluru, A. 2001. Adenine and guanine nucleotide-specific succinyl-CoA synthetases in the clonal β -cell mitochondria: implications in the β -cell high-energy phosphate metabolism in relation to physiological Insulin secretion. *Diabetologia* 44: 89-94.
- Lambeth, D.O., et al. 2004. Expression of two succinyl-CoA synthetases with different nucleotide specificities in mammalian tissues. *J. Biol. Chem.* 279: 36621-36624.

CHROMOSOMAL LOCATION

Genetic locus: SUCLG2 (human) mapping to 3p14.1; Suc1g2 (mouse) mapping to 6 D2.

SOURCE

SUCLG2 (A-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SUCLG2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-99646 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

SUCLG2 (A-15) is recommended for detection of SUCLG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with SUCLG1.

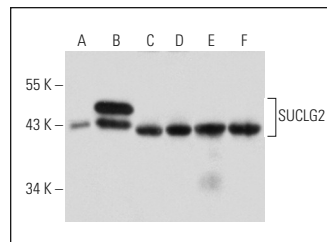
SUCLG2 (A-15) is also recommended for detection of SUCLG2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for SUCLG2 siRNA (h): sc-77883, SUCLG2 siRNA (m): sc-153914, SUCLG2 shRNA Plasmid (h): sc-77883-SH, SUCLG2 shRNA Plasmid (m): sc-153914-SH, SUCLG2 shRNA (h) Lentiviral Particles: sc-77883-V and SUCLG2 shRNA (m) Lentiviral Particles: sc-153914-V.

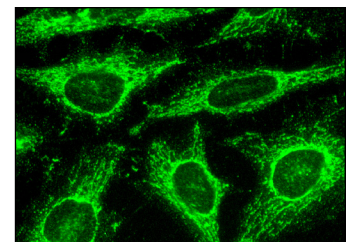
Molecular Weight of SUCLG2: 47 kDa.

Positive Controls: SUCLG2 (m): 293T Lysate: sc-123832, Hep G2 cell lysate: sc-2227 or A-431 whole cell lysate: sc-2201.

DATA



SUCLG2 (A-15): sc-99646. Western blot analysis of SUCLG2 expression in non-transfected 293T: sc-117752 (A), mouse SUCLG2 transfected 293T: sc-123832 (B), HeLa (C), K-562 (D), Hep G2 (E) and A-431 (F) whole cell lysates.



SUCLG2 (A-15): sc-99646. Immunofluorescence staining of methanol-fixed HeLa cells showing mitochondrial localization.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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



Try **SUCLG2 (A-2): sc-390818** or **SUCLG2 (C-1): sc-393756**, our highly recommended monoclonal alternatives to SUCLG2 (A-15).