SANTA CRUZ BIOTECHNOLOGY, INC.

SUCLG2 (C-1): sc-393756

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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-βG, 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

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2. Schiaffino, M.V., d'Addio, M., Alloni, A., Baschirotto, C., Valetti, C., Cortese, K., Puri, C., Bassi, M.T., Colla, C., De Luca, M., Tacchetti, C. and Ballabio, A. 1999. Ocular albinism: evidence for a defect in an intracellular signal transduction system. Nat. Genet. 23: 108-112.
3. 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/
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5. 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.
6. Lambeth, D.O., Tews, K.N., Adkins, S., Frohlich, D. and Milavetz, B.I. 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.

SOURCE

SUCLG2 (C-1) is a mouse monoclonal antibody raised against amino acids 121-229 mapping within an internal region of SUCLG2 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.

STORAGE

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

APPLICATIONS

SUCLG2 (C-1) is recommended for detection of SUCLG2 of 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 SUCLG2 siRNA (h): sc-77883, SUCLG2 shRNA Plasmid (h): sc-77883-SH and SUCLG2 shRNA (h) Lentiviral Particles: sc-77883-V.

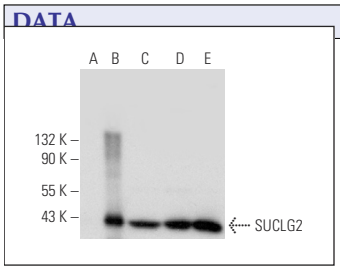
Molecular Weight of SUCLG2: 47 kDa.

Positive Controls: SUCLG2 (h): 293T Lysate: sc-116041, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

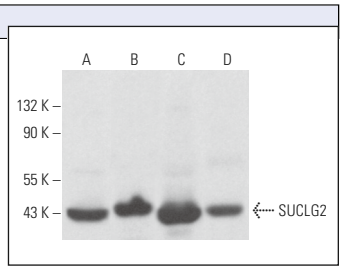
RECOMMENDED SUPPORT REAGENTS

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



SUCLG2 (C-1): sc-393756. Western blot analysis of SUCLG2 expression in non-transfected 293T: sc-117752 (**A**), human SUCLG2 transfected 293T: sc-116041 (**B**), HeLa (**C**), K-562 (**D**) and Hep G2 (**E**) whole cell lysates.



SUCLG2 (C-1): sc-393756. Western blot analysis of SUCLG2 expression in Hep G2 (**A**) and BT-20 (**B**) whole cell lysates and human colon (**C**) and mouse brain (**D**) tissue extracts.

RESEARCH USE

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

PROTOCOLS

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