# SUCLG2 (h): 293T Lysate: sc-116041



The Power to Question

## **BACKGROUND**

SUCLG2 (succinate-CoA ligase, GDP-forming,  $\beta$  subunit), also known as G-BETA, succinyl-CoA ligase [GDP-forming] subunit  $\beta$ , mitochondrial, GTP-specific succinyl-CoA synthetase subunit  $\beta$ , succinyl-CoA synthetase  $\beta$ -G chain or SCS- $\beta$ G, is a 432 amino acid protein belonging to the succinate/malate CoA ligase  $\beta$  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., Mehus, J.G., Tews, K., Milavetz, B.I. and Lambeth, D.O. 1998. Genetic evidence for the expression of ATP- and GTP-specific succinyl-CoA synthetases in multicellular eucaryotes. J. Biol. Chem. 273: 27580-27586.
- 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/
- Fraser, M.E., James, M.N., Bridger, W.A. and Wolodko, W.T. 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., 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.

# **PRODUCT**

SUCLG2 (h): 293T Lysate represents a lysate of human SUCLG2 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

# **STORAGE**

Store at -20 $^{\circ}$  C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

#### **RESEARCH USE**

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

## **APPLICATIONS**

SUCLG2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive SUCLG2 antibodies. Recommended use: 10-20  $\mu$ l per lane

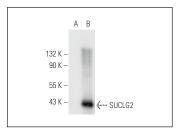
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

SUCLG2 (C-1): sc-393756 is recommended as a positive control antibody for Western Blot analysis of enhanced human SUCLG2 expression in SUCLG2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

# **RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG $\kappa$  BP-HRP: sc-516102 or m-lgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>TM</sup> Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

#### DATA



SUCLG2 (C-1): sc-393756. Western blot analysis of SUCLG2 expression in non-transfected: sc-117752 (A and human SUCLG2 transfected: sc-116041 (B) 293T whole cell lysates.

## **PROTOCOLS**

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