

SUCLG2 (A-2): sc-390818

BACKGROUND

SUCLG2 (succinate-CoA ligase, GDP-forming, β subunit), also known as G- β , 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/>

CHROMOSOMAL LOCATION

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

SOURCE

SUCLG2 (A-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 256-287 within an internal region of SUCLG2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SUCLG2 (A-2) is available conjugated to agarose (sc-390818 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390818 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390818 PE), fluorescein (sc-390818 FITC), Alexa Fluor[®] 488 (sc-390818 AF488), Alexa Fluor[®] 546 (sc-390818 AF546), Alexa Fluor[®] 594 (sc-390818 AF594) or Alexa Fluor[®] 647 (sc-390818 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390818 AF680) or Alexa Fluor[®] 790 (sc-390818 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390818 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

SUCLG2 (A-2) is recommended for detection of SUCLG2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

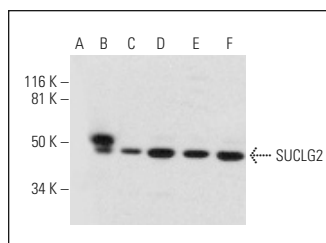
SUCLG2 (A-2) is also recommended for detection of SUCLG2 in additional species, including equine, canine, bovine and porcine.

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.

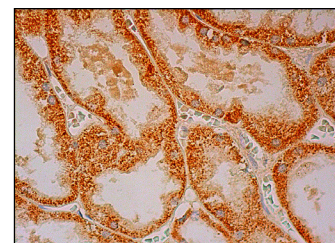
Molecular Weight of SUCLG2: 47 kDa.

Positive Controls: SUCLG2 (m): 293T Lysate: sc-123832, HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

DATA



SUCLG2 (A-2): sc-390818. Western blot analysis of SUCLG2 expression in non-transfected 293T: sc-117752 (A), mouse SUCLG2 transfected 293T: sc-123832 (B), HeLa (C), Hep G2 (D), K-562 (E) and A-431 (F) whole cell lysates.



SUCLG2 (A-2): sc-390818. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

- Xu, Z.W., et al. 2016. SILAC-based proteomic analysis reveals that salidroside antagonizes cobalt chloride-induced hypoxic effects by restoring the tricarboxylic acid cycle in cardiomyocytes. *J. Proteomics* 130: 211-220.
- Cai, Z., et al. 2020. Phosphorylation of PDHA by AMPK drives TCA cycle to promote cancer metastasis. *Mol. Cell* 80: 263-278.e7.
- Wang, Y., et al. 2022. Value of immunohistochemical expression of apelin, succinate dehydrogenase B, chromogranin B, human epidermal growth factor receptor-2, contactin 4, and succinyl-CoA synthetase subunit β in differentiating metastatic from non-metastatic pheochromocytoma and paraganglioma. *Front. Endocrinol.* 13: 882906.

RESEARCH USE

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

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