SANTA CRUZ BIOTECHNOLOGY, INC.

SUCLA2 (A-9): sc-374107

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SUCLA2 (succinate-CoA ligase, ADP-forming, β subunit), also known as A-BETA, SCS-βA or renal carcinoma antigen NY-REN-39, is a 463 amino acid mitochondrial matrix enzyme that belongs to the succinate/malate CoA ligase β subunit family. Widely expressed, SUCLA2 dimerizes with the SCS α subunit to form SCS-A, an essential component of the tricarboxylic acid cycle. Defects in SUCLA2 may be involved in a group of autosomal recessive disorders known as mitochondrial DNA depletion syndromes (MDSs) that are characterized by a decrease in mitochondrial DNA copy numbers in affected tissues. Progressive external ophthalmoplegia (PEO), ataxia-neuropathy and mitochondrial neurogastrointestinal encephalomyopathy (MNGIE) may also be associated with mutations in SUCLA2. Two isoforms of SUCLA2 exist due to alternative splicing events.

REFERENCES

1. Furuyama, K., et al. 2000. Interaction between succinyl CoA synthetase and the heme-biosynthetic enzyme ALAS-E is disrupted in sideroblastic anemia. J. Clin. Invest. 105: 757-764.
2. Elpeleg, O., et al. 2005. Deficiency of the ADP-forming succinyl-CoA synthase activity is associated with encephalomyopathy and mitochondrial DNA depletion. Am. J. Hum. Genet. 76: 1081-1086.

CHROMOSOMAL LOCATION

Genetic locus: SUCLA2 (human) mapping to 13q14.2; Sucla2 (mouse) mapping to 14 D3.

SOURCE

SUCLA2 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 59-93 near the N-terminus of SUCLA2 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.

SUCLA2 (A-9) is available conjugated to agarose (sc-374107 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-374107 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374107 PE), fluorescein (sc-374107 FITC), Alexa Fluor® 488 (sc-374107 AF488), Alexa Fluor® 546 (sc-374107 AF546), Alexa Fluor® 594 (sc-374107 AF594) or Alexa Fluor® 647 (sc-374107 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374107 AF680) or Alexa Fluor® 790 (sc-374107 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374107 P, (100 µg 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

SUCLA2 (A-9) is recommended for detection of SUCLA2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), 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).

SUCLA2 (A-9) is also recommended for detection of SUCLA2 in additional species, including bovine.

Suitable for use as control antibody for SUCLA2 siRNA (h): sc-76598, SUCLA2 siRNA (m): sc-76599, SUCLA2 shRNA Plasmid (h): sc-76598-SH, SUCLA2 shRNA Plasmid (m): sc-76599-SH, SUCLA2 shRNA (h) Lentiviral Particles: sc-76598-V and SUCLA2 shRNA (m) Lentiviral Particles: sc-76599-V.

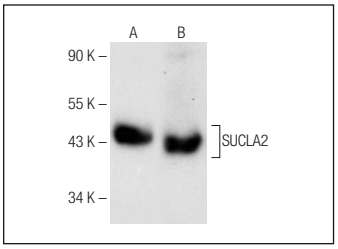
Molecular Weight of SUCLA2: 50 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, ES-2 cell lysate: sc-24674 or MOLT-4 cell lysate: sc-2233.

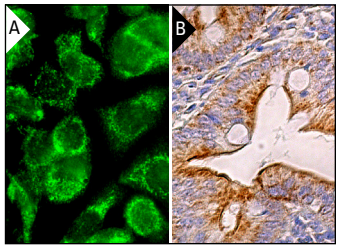
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



SUCLA2 (A-9): sc-374107. Western blot analysis of SUCLA2 expression in 293T (**A**) and ES-2 (**B**) whole cell lysates.



SUCLA2 (A-9): sc-374107. Immunofluorescence staining of formalin-fixed A-431 cells showing mitochondrial localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells (**B**).

RESEARCH USE

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