SANTA CRUZ BIOTECHNOLOGY, INC.

PDSS2 (C-12): sc-515137

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Prenyl diphosphate synthase subunit 2 (PDSS2), also known as decaprenyl-diphosphate synthase subunit 2, decaprenyl pyrophosphate synthetase subunit 2 and candidate tumor suppressor protein, is a 399 amino acid member of the FPP/GGPP synthetase family. PDSS2 exists as a hetrotetramer, with two PDSS2 and two PDSS1 subunits, and functions primarily as a candidate tumor suppressor protein. Defects in PDSS2 have been shown to cause coenzyme Q10 deficiency, an autosomal recessive disorder with three predominant phenotypes: a predominantly myopathic form with central nervous system involvement, an infantile encephalomyopathy with renal dysfunction and an ataxic form with cerebellar atrophy. The gene encoding PDSS2 maps to chromosome 6q21. Two isoforms of PDSS2 exist as a result of alternative splicing events.

CHROMOSOMAL LOCATION

Genetic locus: PDSS2 (human) mapping to 6q21; Pdss2 (mouse) mapping to 10 B2.

SOURCE

PDSS2 (C-12) is a mouse monoclonal antibody raised against amino acids 100-399 mapping at the C-terminus of PDSS2 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.

PDSS2 (C-12) is available conjugated to agarose (sc-515137 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-515137 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515137 PE), fluorescein (sc-515137 FITC), Alexa Fluor® 488 (sc-515137 AF488), Alexa Fluor® 546 (sc-515137 AF546), Alexa Fluor® 594 (sc-515137 AF594) or Alexa Fluor® 647 (sc-515137 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515137 AF680) or Alexa Fluor® 790 (sc-515137 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

PDSS2 (C-12) is recommended for detection of PDSS2 of mouse, rat and 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 PDSS2 siRNA (h): sc-76100, PDSS2 siRNA (m): sc-76101, PDSS2 shRNA Plasmid (h): sc-76100-SH, PDSS2 shRNA Plasmid (m): sc-76101-SH, PDSS2 shRNA (h) Lentiviral Particles: sc-76100-V and PDSS2 shRNA (m) Lentiviral Particles: sc-76101-V.

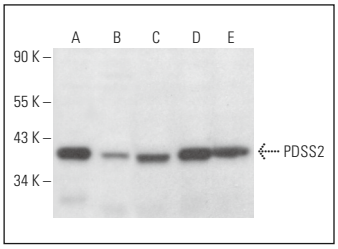
Molecular Weight of PDSS2: 44 kDa.

Positive Controls: human kidney extract: sc-363764, A-375 cell lysate: sc-3811 or A-431 whole cell lysate: sc-2201.

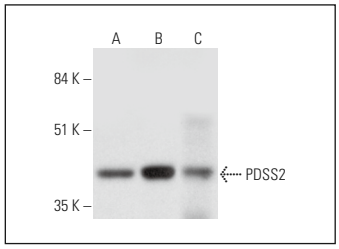
RECOMMENDED SUPPORT REAGENTS

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



PDSS2 (C-12): sc-515137. Western blot analysis of PDSS2 expression in A549 (**A**), PC-3 (**B**), A-10 (**C**), A-431 (**D**) and A-375 (**E**) whole cell lysates.



PDSS2 (C-12): sc-515137. Western blot analysis of PDSS2 expression in A-375 (**A**) and A-431 (**B**) whole cell lysates and human kidney tissue extract (**C**).

SELECT PRODUCT CITATIONS

1. Yen, H.C., et al. 2020. Characterization of human mitochondrial PDSS and COQ proteins and their roles in maintaining coenzyme Q10 levels and each other's stability. Biochim. Biophys. Acta Bioenerg. 1861: 148192.
2. Xia, X., et al. 2023. SKA2-mediated transcriptional downregulation of the key enzyme of CoQ10 biosynthesis PDSS2 in lung cancer cells. J. Cancer 14: 379-392.
3. Lim, D.M., et al. 2023. Bioinformatic analysis of the obesity paradox and possible associated factors in colorectal cancer using TCGA cohorts. J. Cancer 14: 322-335.
4. Fujita, H., et al. 2024. PRDX6 augments selenium utilization to limit iron toxicity and ferroptosis. Nat. Struct. Mol. Biol. 31: 1277-1285.
5. Yen, H.C., et al. 2024. Alterations in coenzyme Q10 status in a cybrid line harboring the 3243A>G mutation of mitochondrial DNA is associated with abnormal mitochondrial bioenergetics and dysregulated mitochondrial biogenesis. Biochim. Biophys. Acta Bioenerg. 1865: 149492.

STORAGE

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

PROTOCOLS

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