PREPL (E-9): sc-393321

SANTA CRUZ® BIOTECHNOLOGY

The Power to Question

BACKGROUND

PREPL (prolyl endopeptidase-like) is a 727 amino acid cytosolic protein that belongs to the prolyl oligopeptidase subfamily of serine peptidases. PREPL functions as a homodimer and is widely expressed, with highest levels found in heart, brain, kidney and skeletal muscle. Unlike its family members PREP and oligopeptidase B which require both amino and carboxy-terminal sequences for activity, PREPL activity appears to be dependent on only the carboxy-terminal domain. Defects in the gene encoding PREPL results in hypotonia-cystinuria syndrome, also known as 2p21 deletion syndrome, which is characterized by hypotonia at birth, growth hormone deficiency and failure to thrive. The disease is caused by homozygous deletion resulting in disruption of both the SLC3A1 and PREPL genes on chromosome 2p21. There are four isoforms of PREPL that are produced as a result of alternative splicing events.

REFERENCES

1. Szeltner, Z., et al. 2005. The PREPL A protein, a new member of the prolyl oligopeptidase family, lacking catalytic activity. Cell. Mol. Life Sci. 62: 2376-2381.

2. Parvari, R., et al. 2005. The 2p21 deletion syndrome: characterization of the transcription content. Genomics 86: 195-211.

3. Jaeken, J., et al. 2006. Deletion of PREPL, a gene encoding a putative serine oligopeptidase, in patients with hypotonia-cystinuria syndrome. Am. J. Hum. Genet. 78: 38-51.

4. Martens, K., et al. 2006. PREPL: a putative novel oligopeptidase propelled into the limelight. Biol. Chem. 387: 879-883.

5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609557. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PREPL (human) mapping to 2p21.

SOURCE

PREPL (E-9) is a mouse monoclonal antibody raised against amino acids 512-727 mapping at the C-terminus of PREPL 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.

PREPL (E-9) is available conjugated to agarose (sc-393321 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393321 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393321 PE), fluorescein (sc-393321 FITC), Alexa Fluor® 488 (sc-393321 AF488), Alexa Fluor® 546 (sc-393321 AF546), Alexa Fluor® 594 (sc-393321 AF594) or Alexa Fluor® 647 (sc-393321 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393321 AF680) or Alexa Fluor® 790 (sc-393321 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

PREPL (E-9) is recommended for detection of PREPL 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 PREPL siRNA (h): sc-94770, PREPL shRNA Plasmid (h): sc-94770-SH and PREPL shRNA (h) Lentiviral Particles: sc-94770-V.
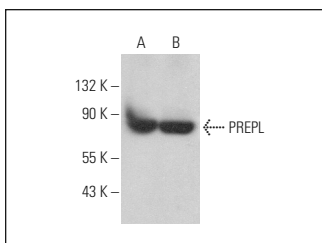
Molecular Weight of PREPL: 72 kDa.

Positive Controls: SJRH30 cell lysate: sc-2287, A-673 cell lysate: sc-2414 or SK-MEL-28 cell lysate: sc-2236.
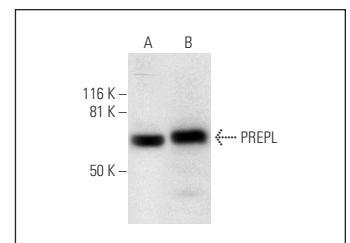
RECOMMENDED SUPPORT REAGENTS

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

PREPL (E-9): sc-393321. Western blot analysis of PREPL expression in SJRH30 (**A**) and A-673 (**B**) whole cell lysates.

PREPL (E-9): sc-393321. Western blot analysis of PREPL expression in SK-MEL-28 (**A**) and SJRH30 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Rosier, K., et al. 2021. Prolyl endopeptidase-like is a (thio)esterase involved in mitochondrial respiratory chain function. iScience 24: 103460.

STORAGE

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

RESEARCH USE

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