SANTA CRUZ BIOTECHNOLOGY, INC.

PPP1R3 (C-8): sc-398425

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

PPP1R3, also known as GM, PP1G or PPP1R3A (protein phosphatase 1, regulatory (inhibitor) subunit 3A), is a 1,122 amino acid single-pass membrane protein that contains one carbohydrate binding type-21 (CBM21) domain and exists as two alternatively spliced isoforms. Expressed in skeletal muscle and heart, PPP1R3 likely functions as a glycogen-targeting subunit for PP1, which is essential for cell division and is involved in regulating glycogen metabolism, muscle contractility and protein synthesis. Although PPP1R3 plays an important role in glycogen synthesis, it is not essential for Insulin activation of glycogen synthase. PPP1R3 defects may cause susceptibility to noninsulin-dependent diabetes mellitus (NIDDM), also known as diabetes mellitus type II, which is characterized by an autosomal dominant mode of inheritance, onset during adulthood and Insulin resistance. PPP1R3 also occurs in diverse human cancer cell lines and primary lung carcinomas, indicating that it may function as a tumor suppressor in carcinogenesis. The gene that encodes PPP1R3 maps to human chromosome 7q31.1.

REFERENCES

1. Chen, Y.H., et al. 1994. Sequence of the human glycogen-associated regulatory subunit of type 1 protein phosphatase and analysis of its coding region and mRNA level in muscle from patients with NIDDM. Diabetes 43: 1234-1241.
2. Xia, J., et al. 1998. A common variant in PPP1R3 associated with Insulin resistance and type 2 diabetes. Diabetes 47: 1519-1524.

CHROMOSOMAL LOCATION

Genetic locus: PPP1R3A (human) mapping to 7q31.1; Ppp1r3a (mouse) mapping to 6 A1.

SOURCE

PPP1R3 (C-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 759-774 within an internal region of PPP1R3 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.

PPP1R3 (C-8) is available conjugated to agarose (sc-398425 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398425 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398425 PE), fluorescein (sc-398425 FITC), Alexa Fluor® 488 (sc-398425 AF488), Alexa Fluor® 546 (sc-398425 AF546), Alexa Fluor® 594 (sc-398425 AF594) or Alexa Fluor® 647 (sc-398425 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398425 AF680) or Alexa Fluor® 790 (sc-398425 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398425 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PPP1R3 (C-8) is recommended for detection of PPP1R3 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).

PPP1R3 (C-8) is also recommended for detection of PPP1R3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for PPP1R3 siRNA (h): sc-89699, PPP1R3 siRNA (m): sc-152420, PPP1R3 shRNA Plasmid (h): sc-89699-SH, PPP1R3 shRNA Plasmid (m): sc-152420-SH, PPP1R3 shRNA (h) Lentiviral Particles: sc-89699-V and PPP1R3 shRNA (m) Lentiviral Particles: sc-152420-V.

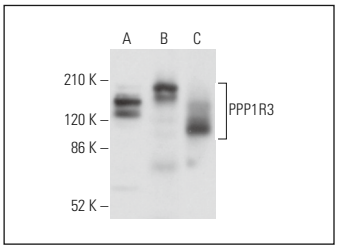
Molecular Weight of PPP1R3 isoforms: 126/8 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, mouse spleen extract: sc-2391 or human heart extract: sc-363763.

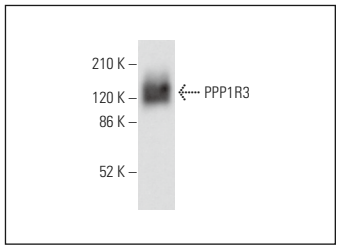
RECOMMENDED SUPPORT REAGENTS

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



PPP1R3 (C-8): sc-398425. Western blot analysis of PPP1R3 expression in Jurkat whole cell lysate (**A**) and human heart (**B**) and mouse heart (**C**) tissue extracts.



PPP1R3 (C-8): sc-398425. Western blot analysis of PPP1R3 expression in mouse spleen tissue extract.

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.