

PPP1R3 (K-13): sc-160684

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 2 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

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- Hegele, R.A., et al. 1998. Variation in the AU(AT)-rich element within the 3'-untranslated region of PPP1R3 is associated with variation in plasma glucose in aboriginal Canadians. *J. Clin. Endocrinol. Metab.* 83: 3980-3983.
- Kohno, T., et al. 1999. Alterations of the PPP1R3 gene in human cancer. *Cancer Res.* 59: 4170-4174.
- Xia, J., et al. 1999. A type 2 diabetes-associated polymorphic ARE motif affecting expression of PPP1R3 is involved in RNA-protein interactions. *Mol. Genet. Metab.* 68: 48-55.
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- Takakura, S., et al. 2000. Somatic mutations and genetic polymorphisms of the PPP1R3 gene in patients with several types of cancers. *Oncogene* 19: 836-840.

CHROMOSOMAL LOCATION

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

SOURCE

PPP1R3 (K-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PPP1R3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160684 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PPP1R3 (K-13) is recommended for detection of PPP1R3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

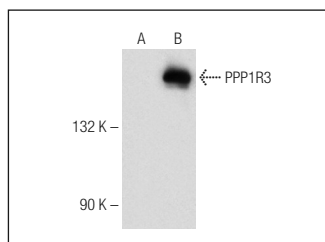
PPP1R3 (K-13) is also recommended for detection of PPP1R3 in additional species, including equine, canine, bovine, porcine and avian.

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: PPP1R3 (h): 293T Lysate: sc-129536.

DATA



PPP1R3 (K-13): sc-160684. Western blot analysis of PPP1R3 expression in non-transfected: sc-117752 (A) and human PPP1R3 transfected: sc-129536 (B) 293T whole cell lysates.

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.



Try **PPP1R3 (C-8): sc-398425**, our highly recommended monoclonal alternative to PPP1R3 (K-13).