

# PDXDC1 (G-13): sc-162007

## BACKGROUND

PDXDC1 (pyridoxal-dependent decarboxylase domain containing 1), also known as LP8165, KIAA0251 or PDXDC1, is a 788 amino acid protein belonging to the group II decarboxylase family. Encoded by a gene that maps to human chromosome 16p13.11, PDXDC1 is significantly and extensively conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and *C. elegans*. While PDXDC1 is suggested to be an ancient and common link for pyridoxal-dependent decarboxylases, it is postulated that prokaryotic and eukaryotic HDC (histidine decarboxylase) activities evolved independently. Existing as two alternatively spliced isoforms, PDXDC1 is phosphorylated upon DNA damage, possibly by Atm or ATR. PDXDC1 plays a role in carboxylic acid metabolic processes, carboxy-lyase activity, protein binding and pyridoxal phosphate binding.

## REFERENCES

1. Jackson, F.R. 1990. Prokaryotic and eukaryotic pyridoxal-dependent decarboxylases are homologous. *J. Mol. Evol.* 31: 325-329.
2. John, R.A. 1995. Pyridoxal phosphate-dependent enzymes. *Biochim. Biophys. Acta* 1248: 81-96.
3. Olsen, J.V., et al. 2006. Global, *in vivo*, and site-specific phosphorylation dynamics in signaling networks. *Cell* 127: 635-648.
4. Beausoleil, S.A., et al. 2006. A probability-based approach for high-throughput protein phosphorylation analysis and site localization. *Nat. Biotechnol.* 24: 1285-1292.
5. Matsuoka, S., et al. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.
6. Dephoure, N., et al. 2008. A quantitative atlas of mitotic phosphorylation. *Proc. Natl. Acad. Sci. USA* 105: 10762-10767.
7. Okada, Y., et al. 2010. A genome-wide association study in 19 633 Japanese subjects identified LHX3-QSOX2 and IGF1 as adult height loci. *Hum. Mol. Genet.* 19: 2303-2312.

## CHROMOSOMAL LOCATION

Genetic locus: PDXDC1 (human) mapping to 16p13.11; Pdxdc1 (mouse) mapping to 16 A1.

## SOURCE

PDXDC1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PDXDC1 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-162007 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

PDXDC1 (G-13) is recommended for detection of PDXDC1 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).

PDXDC1 (G-13) is also recommended for detection of PDXDC1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for PDXDC1 siRNA (h): sc-93250, PDXDC1 siRNA (m): sc-152144, PDXDC1 shRNA Plasmid (h): sc-93250-SH, PDXDC1 shRNA Plasmid (m): sc-152144-SH, PDXDC1 shRNA (h) Lentiviral Particles: sc-93250-V and PDXDC1 shRNA (m) Lentiviral Particles: sc-152144-V.

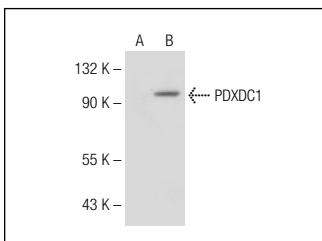
Molecular Weight of PDXDC1: 87 kDa.

Positive Controls: PDXDC1 (m): 293T Lysate: sc-122474.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



PDXDC1 (G-13): sc-162007. Western blot analysis of PDXDC1 expression in non-transfected: sc-117752 (A) and mouse PDXDC1 transfected: sc-122474 (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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.