

# PCBD2 (D-14): sc-163211

## BACKGROUND

PCBD2 (pterin-4  $\alpha$ -carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1  $\alpha$  (TCF1) 2), also known as PHS2, 4- $\alpha$ -hydroxy-tetrahydropterin dehydratase 2, HNF-1- $\alpha$  dimerization cofactor, DCOH2 or DCOHM, is a 130 amino acid protein that plays a role in tetrahydrobiopterin biosynthesis. PCBD2 exists as a homotetramer that interacts with Dyrk1B and assists in the dimerization of HNF-1 $\alpha$  (hepatocyte nuclear factor 1- $\alpha$ ) while improving its transcriptional activity. A member of the pterin-4- $\alpha$ -carbinolamine dehydratase family, PCBD2 prevents the formation of 7-pterins and is encoded by a gene that maps to human chromosome 5q31.1 and mouse chromosome 13 B1.

## REFERENCES

- Lim, S., et al. 2002. Mirk protein kinase is activated by MKK3 and functions as a transcriptional activator of HNF1 $\alpha$ . *J. Biol. Chem.* 277: 25040-25046.
- Arias, J.M., et al. 2003. Cloning of a novel one-repeat calcium channel-like gene. *Biochem. Biophys. Res. Commun.* 303: 31-36.
- Rose, R.B., et al. 2004. Biochemical and structural basis for partially redundant enzymatic and transcriptional functions of DCoH and DCoH2. *Biochemistry* 43: 7345-7355.
- Schaaf, C.P., et al. 2005. Novel interaction partners of the TPR/MET tyrosine kinase. *FASEB J.* 19: 267-269.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609836. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Ravasi, T., et al. 2010. An atlas of combinatorial transcriptional regulation in mouse and man. *Cell* 140: 744-752.

## CHROMOSOMAL LOCATION

Genetic locus: PCBD2 (human) mapping to 5q31.1; Pcbd2 (mouse) mapping to 13 B1.

## SOURCE

PCBD2 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PCBD2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-163211 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

PCBD2 (D-14) is recommended for detection of PCBD2 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with PCBD1.

PCBD2 (D-14) is also recommended for detection of PCBD2 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for PCBD2 siRNA (h): sc-91865, PCBD2 siRNA (m): sc-152051, PCBD2 shRNA Plasmid (h): sc-91865-SH, PCBD2 shRNA Plasmid (m): sc-152051-SH, PCBD2 shRNA (h) Lentiviral Particles: sc-91865-V and PCBD2 shRNA (m) Lentiviral Particles: sc-152051-V.

Molecular Weight of PCBD2: 14 kDa.

## 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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) 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<sup>™</sup> Mounting Medium: sc-24941.

## PROTOCOLS

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