

PCBD1 (CD-37): sc-100488

BACKGROUND

PCBD1 (pterin-4 α -carbinolamine dehydratase), also known as PCD, PHS, DCOH (dimerization cofactor of hepatocyte nuclear factor 1 α) or PCBD, is a component of the phenylalanine hydroxylase (PAH) system and participates in tetrahydrobiopterin biosynthesis. More specifically, PCBD1 catalyzes the dehydration of pterin-4 α -carbinolamine (4-OH-BH₄) to quinonoid dihydrobiopterin (q-BH₂), an essential reaction for the regeneration of 6(R)-L-erythro-5,6,7,8-tetrahydrobiopterin (6(R)BH₄). In addition, PCBD1 can homodimerize and, in this dimer, can function as a transcriptional activator cofactor for HNF-1 α . Mutations in the gene encoding PCBD1 lead to an accumulation of 4-OH-BH₄ which subsequently produces 7-BH₄ (a potent inhibitor of PAH), and may result in primapterinuria. Patients with primapterinuria, a mild form of phenylketonuria (PKU), exhibit both hyperphenylalaninemia (HPA) and excretion of 7-substituted pterins.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: PCBD1 (human) mapping to 10q22.1; Pcbd1 (mouse) mapping to 10 B4.

SOURCE

PCBD1 (CD-37) is a mouse monoclonal antibody raised against recombinant PCBD1 of human origin.

PRODUCT

Each vial contains 100 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

PCBD1 (CD-37) is recommended for detection of PCBD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PCBD1 siRNA (h): sc-90559, PCBD1 siRNA (m): sc-152050, PCBD1 shRNA Plasmid (h): sc-90559-SH, PCBD1 shRNA Plasmid (m): sc-152050-SH, PCBD1 shRNA (h) Lentiviral Particles: sc-90559-V and PCBD1 shRNA (m) Lentiviral Particles: sc-152050-V.

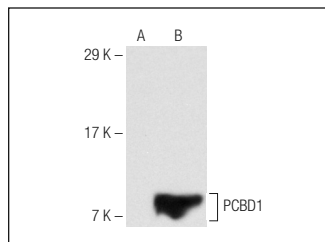
Molecular Weight of PCBD1: 12 kDa.

Positive Controls: C32 whole cell lysate: sc-2205 or PCBD1 (m): 293T Lysate: sc-122420.

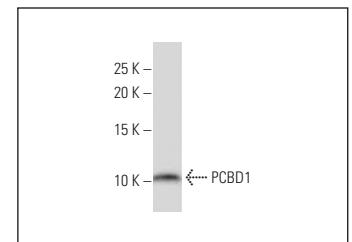
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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).

DATA



PCBD1 (CD-37): sc-100488. Western blot analysis of PCBD1 expression in non-transfected: sc-117752 (A) and mouse PCBD1 transfected: sc-122420 (B) 293T whole cell lysates.



PCBD1 (CD-37): sc-100488. Western blot analysis of PCBD1 expression in C32 whole cell lysate.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.