

# HPPD (C-18): sc-69282

## BACKGROUND

HPPD (4-hydroxyphenylpyruvate dioxygenase), also known as PPD, GLOD3 or HPD, is a 393 amino acid protein that belongs to the 4HPPD family and is involved in amino acid degradation. Existing as a homodimer, HPPD uses zinc as a cofactor to catalyze the third step in the conversion of L-phenylalanine to fumarate and acetoacetic acid. Defects in the gene encoding HPPD are the cause of tyrosinemia type 3 (TYRO3) and hawkinsinuria (HAWK), both of which are inborn errors of metabolism that are associated with a variety of symptoms, including mental retardation and seizures (associated with TYRO3) and hair and urine abnormalities (associated with HAWK). The gene encoding HPPD maps to human chromosome 12, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome.

## REFERENCES

1. Rüetschi, U., Dellsén, A., Sahlin, P., Stenman, G., Rymo, L. and Lindstedt, S. 1993. Human 4-hydroxyphenylpyruvate dioxygenase. Primary structure and chromosomal localization of the gene. *Eur. J. Biochem.* 213: 1081-1089.
2. Awata, H., Endo, F. and Matsuda, I. 1994. Structure of the human 4-hydroxyphenylpyruvic acid dioxygenase gene (HPD). *Genomics* 23: 534-539.
3. Stenman, G., Röijer, E., Rüetschi, U., Dellsén, A., Rymo, L. and Lindstedt, S. 1995. Regional assignment of the human 4-hydroxyphenylpyruvate dioxygenase gene (HPD) to 12q24→qter by fluorescence *in situ* hybridization. *Cytogenet. Cell Genet.* 71: 374-376.
4. Rüetschi, U., Rymo, L. and Lindstedt, S. 1997. Human 4-hydroxyphenylpyruvate dioxygenase gene (HPD). *Genomics* 44: 292-299.
5. Rüetschi, U., Cerone, R., Pérez-Cerda, C., Schiaffino, M.C., Standing, S., Ugarte, M. and Holme, E. 2000. Mutations in the 4-hydroxyphenylpyruvate dioxygenase gene (HPD) in patients with tyrosinemia type III. *Hum. Genet.* 106: 654-662.

## CHROMOSOMAL LOCATION

Genetic locus: HPD (human) mapping to 12q24.31; Hpd (mouse) mapping to 5 F.

## SOURCE

HPPD (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HPPD 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-69282 P, (100 µg 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.

## APPLICATIONS

HPPD (C-18) is recommended for detection of HPPD 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).

HPPD (C-18) is also recommended for detection of HPPD in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for HPPD siRNA (h): sc-75297, HPPD siRNA (m): sc-75298, HPPD shRNA Plasmid (h): sc-75297-SH, HPPD shRNA Plasmid (m): sc-75298-SH, HPPD shRNA (h) Lentiviral Particles: sc-75297-V and HPPD shRNA (m) Lentiviral Particles: sc-75298-V.

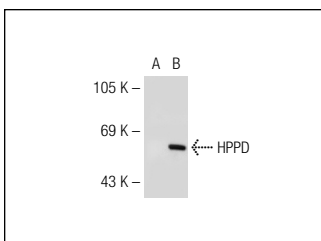
Molecular Weight of HPPD: 45 kDa.

Positive Controls: HPPD (h): 293 Lysate: sc-159724.

## 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



HPPD (C-18): sc-69282. Western blot analysis of HPPD expression in non-transfected: sc-110760 (A) and human HPPD transfected: sc-159724 (B) 293 whole cell lysates.

## RESEARCH USE

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

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Try **HPPD (B-11): sc-390279** or **HPPD (F-5): sc-271672**, our highly recommended monoclonal alternatives to HPPD (C-18).