BACKGROUND

HPPD (4-hydroxyphenylpyruvate dioxygenase), also known as PPD, GL03 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


CHROMOSOMAL LOCATION

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

SOURCE

HPPD (F-5) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of HPPD of human origin.

PRODUCT

Each vial contains 200 μg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

HPPD (F-5) is recommended for detection of HPPD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).


Molecular Weight of HPPD: 45 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or Hep G2 cell lysate: sc-2227.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Luminol Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA

HPPD (F-5): sc-271672. Western blot analysis of HPPD expression in HeLa (A) and Hep G2 (B) whole cell lysates.

STOREAGE

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 website at www.scbt.com for detailed protocols and support products.