HPD Antibody (N-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	HPD, Blocking Peptide
Full Product Name	HPD Antibody (N-term) Blocking Peptide
Product Gene Name	HPD blocking peptide
Product Synonym Gene Name	PPD
Product Synonym Names	4-hydroxyphenylpyruvate dioxygenase; 4-hydroxyphenylpyruvic acid oxidase; 4HPPD; HPD; HPPDase; HPD; PPD
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence used to generate the antibody was selected from the N-term region of human HPD. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	HPD peptide (MBS9227725) is used for blocking the activity of HPD antibody (MBS9214734)
Molecular Weight	40,497 Da
OMIM	140350
Related Product Information for HPD blocking peptide	MBS9227725 is a blocking peptide targeting HPD. Also known as HPD Antibody (N-term) Blocking Peptide. Key enzyme in the degradation of tyrosine.
Other Notes	Small volumes of HPD blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for HPD. It may not necessarily be applicable to this product.

NCBI GI #	417144
NCBI GeneID	3242
NCBI Accession #	P32754.2
UniProt Primary Accession #	P32754
UniProt Secondary Accession #	Q13234; A8K461; B3KQ63
UniProt Related Accession #	P32754
NCBI Official Full Name	4-hydroxyphenylpyruvate dioxygenase
NCBI Official Synonym Full Names	4-hydroxyphenylpyruvate dioxygenase
NCBI Official Symbol	HPD
NCBI Official Synonym Symbols	PPD; 4HPPD; GLOD3; 4-HPPD; HPPDASE
UniProt Protein Name	4-hydroxyphenylpyruvate dioxygenase
UniProt Synonym Protein Names	4-hydroxyphenylpyruvic acid oxidase; 4HPPD; HPD; HPPDase

Protein Family	Probable 4-hydroxyphenylpyruvate dioxygenase
UniProt Gene Name	HPD
UniProt Synonym Gene Names	PPD; 4HPPD; HPD; HPPDase
UniProt Entry Name	HPPD_HUMAN
NCBI Protein Information	4-hydroxyphenylpyruvate dioxygenase
NCBI Summary for HPD	The protein encoded by this gene is an enzyme in the catabolic pathway of tyrosine. The encoded protein catalyzes the conversion of 4-hydroxyphenylpyruvate to homogentisate. Defects in this gene are a cause of tyrosinemia type 3 (TYRO3) and hawkinsinuria (HAWK). Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2010]
UniProt Comments for HPD	HPD: Key enzyme in the degradation of tyrosine. Defects in HPD are the cause of tyrosinemia type 3 (TYRO3). TYRO3 is an inborn error of metabolism characterized by elevations of tyrosine in the blood and urine, seizures and mild mental retardation. Defects in HPD are a cause of hawkinsinuria (HAWK). HAWK is an inborn error of tyrosine metabolism characterized by failure to thrive, persistent metabolic acidosis, fine and sparse hair, and excretion of the unusual cyclic amino acid metabolite, hawkinsin, in the urine. Belongs to the 4HPPD family. 2 isoforms of the human protein are produced by alternative splicing. Protein type: EC 1.13.11.27; Cofactor and Vitamin Metabolism - ubiquinone and other terpenoid-quinone biosynthesis; Amino Acid Metabolism - tyrosine; Oxidoreductase; Amino Acid Metabolism - phenylalanine Chromosomal Location of Human Ortholog: 12q24.31 Cellular Component: cytosol Molecular Function: 4-hydroxyphenylpyruvate dioxygenase activity Biological Process: L-phenylalanine catabolic process; tyrosine catabolic process Disease: Hawkinsinuria; Tyrosinemia, Type Iii
Research Articles on HPD	**1.** Glutamine375 has a critical role for 4-HPPD in orientating the tail and ensuring the conformation of the terminal alpha-helix of the enzyme to maintain the integrity of the active site for biocatalysis.
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