PRODUCT INFORMATION

Expression system E.coli

Domain 1-393aa

UniProt No. P49429

NCBI Accession No. NP_032303

Alternative Names

4-hydroxyphenylpyruvate dioxygenase, 4HPPD, Fla, Flp, Hppd, Laf, 4-hydroxyphenylpyruvic acid oxidase, HPPDase, F Alloantigen, F protein

PRODUCT SPECIFICATION

Molecular Weight

47.4 kDa (416aa) confirmed by MALDI-TOF

Concentration

0.5mg/ml (determined by absorbance at 280nm)

Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 10% glycerol

Purity > 90% by SDS-PAGE

Tag His-Tag

Application SDS-PAGE

Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

BACKGROUND

Description

Hpd, also known as 4-hydroxyphenylpyruvate dioxygenase, is a Fe-containing enzyme that catalyzes the second reaction in the catabolism of tyrosine the conversion of 4-hydroxyphenylpyruvate to homogentisate. Existing as a homodimer, Hpd 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 Hpd are the cause of tyrosinemia type 3 and hawkinsinuria, both of which are inborn errors of metabolism that are associated with a variety of symptoms,



including mental retardation and seizures and hair and urine abnormalities. Recombinant mouse Hpd protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

Amino acid Sequence

<MGSSHHHHHH SSGLVPRGSH MGS>MTTYNNK GPKPERGRFL HFHSVTFWVG NAKQAASFYC NKMGFEPLAY RGLETGSREV VSHVIKQGKI VFVLCSALNP WNKEMGDHLV KHGDGVKDIA FEVEDCDHIV QKARERGAKI VREPWVEQDK FGKVKFAVLQ TYGDTTHTLV EKINYTGRFL PGFEAPTYKD TLLPKLPRCN LEIIDHIVGN QPDQEMQSAS EWYLKNLQFH RFWSVDDTQV HTEYSSLRSI VVTNYEESIK MPINEPAPGR KKSQIQEYVD YNGGAGVQHI ALKTEDIITA IRHLRERGTE FLAAPSSYYK LLRENLKSAK IQVKESMDVL EELHILVDYD EKGYLLQIFT KPMQDRPTLF LEVIQRHNHQ GFGAGNFNSL FKAFEEEQAL RGNLTDLEPN GVRSGM

General References

Wada GH., et al. (1975) J Biol Chem J. 250(17):6720-6. Endo F., et al. (1997) J Biol Chem. 26 272(39):24426-32.

DATA

SDS-PAGE



3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.