Recombinant DOPD protein (His tag)

Catalog Number	546902
Synonyms	D-dopachrome tautomerase; Phenylpyruvate tautomerase II
Species	Human
Expression System	E. coli
Accession	P30046
Molecular Weight	Predictes a molecular mass of 14.23 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	2-118
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-118 aa (P30046) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	This recombinant protein product features a stable and soluble fragment (residues 2-118) of human D-dopachrome decarboxylase (EC 4.1.1.84), also known as D-dopachrome tautomerase or phenylpyruvate tautomerase II. This fragment is engineered for structural and biochemical studies, offering researchers a functional unit that retains key enzymatic activity for tautomerization and decarboxylation reactions. D-dopachrome decarboxylase, encoded by the DDT gene in Homo sapiens, catalyzes the tautomerization of D-dopachrome with decarboxylation to produce 5,6-dihydroxyindole (DHI), a key intermediate in melanin biosynthesis and related metabolic pathways. The enzyme is localized in the cytoplasm, where it facilitates critical biochemical conversions. This fragment (residues 2-118) encompasses the complete functional domain of the protein, providing an optimal tool for investigating its enzymatic mechanisms and cellular roles without the complexities of the full-length protein.