Recombinant DHPR protein (His tag)

Catalog Number	542072
Synonyms	HDHPR; Quinoid dihydropteridine reductase; Short chain dehydrogenase/reductase family 33C member 1
Species	Human
Expression System	E. coli
Accession	P09417
Molecular Weight	Predictes a molecular mass of 27.31 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	2-244
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 2-244 aa (P09417) 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 product features a recombinant fragment of human Dihydropteridine reductase (HDHPR), encompassing residues 2-244. It is designed to provide a stable and soluble unit ideal for structural studies and biochemical assays, supporting research into tetrahydrobiopterin regeneration and related metabolic pathways. Dihydropteridine reductase (encoded by the QDPR gene) is an essential enzyme in humans that catalyzes the conversion of quinonoid dihydrobiopterin to tetrahydrobiopterin. Tetrahydrobiopterin serves as a critical cofactor for aromatic amino acid hydroxylases and nitric oxide synthases, playing a pivotal role in neurotransmitter synthesis and nitric oxide production. This enzyme's function is vital for maintaining cellular redox balance and supporting metabolic processes linked to neurological and vascular health.