Recombinant DPH3 protein (His tag)

Catalog Number	540987
Synonyms	CSL-type zinc finger-containing protein 2; DelGEF-interacting protein 1; DelGIP1
Species	Human
Expression System	E. coli
Accession	Q96FX2
Molecular Weight	Predictes a molecular mass of 10.89 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 13 kDa band.

Product Information

Sequence Region	1-82
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 1-82 aa (Q96FX2) 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	Recombinant DPH3 (Diphthamide biosynthesis protein 3) fragment (amino acids 1-82) from Homo sapiens, encompassing the complete DPH-type MB domain. This high-purity protein is ideal for investigating diphthamide biosynthesis, iron-sulfur cluster regulation, and tRNA modification mechanisms in cellular studies. DPH3, also known as CSL-type zinc finger-containing protein 2 or DelGIP1, is a multifunctional protein critical for post-translational modifications and tRNA regulation. It facilitates the first step of diphthamide biosynthesis—a unique modification of histidine in elongation factor 2—by serving as an electron donor to reduce iron-sulfur clusters in the DPH1-DPH2 complex. This activity maintains cluster integrity and enables the transfer of a 3-amino-3-carboxypropyl group from S-adenosyl-L-methionine. Additionally, DPH3 associates with the elongator complex to support tRNA wobble base modifications (e.g., mcm5U and ncm5U), which are essential for accurate translation. Located in both the cytoplasm and nucleus, DPH3 integrates roles in protein synthesis fidelity and cellular redox processes.