Recombinant PHYD1 protein (His tag)

Catalog Number	547431
Synonyms	Protein PHYHD1
Species	Human
Expression System	E. coli
Accession	Q5SRE7
Molecular Weight	Predictes a molecular mass of 34.07 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 34 kDa band.

Product Information

Sequence Region	1-291
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-291 aa (Q5SRE7) 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 Human Phytanoyl-CoA dioxygenase domain-containing protein 1 (PHYHD1), encompassing amino acids 1-291, is a high-purity fragment engineered for stability and solubility. This product retains the essential 2-oxoglutarate-dependent dioxygenase activity, making it ideal for enzymatic assays, structural studies, and biochemical research. Phytanoyl-CoA dioxygenase domain-containing protein 1 (PHYHD1) is an iron-dependent 2-oxoglutarate (2OG)-dependent dioxygenase that catalyzes the conversion of 2-oxoglutarate to succinate and CO_2. While it shares structural features with enzymes involved in phytanoyl-CoA metabolism, PHYHD1 does not hydroxylate acyl-coenzyme A derivatives or fatty acid CoA thioesters, indicating a distinct physiological role. Isoforms 2 and 3 of the protein are predicted to lack enzymatic activity. The recombinant fragment (1-291) represents a stable, soluble domain selected for functional and structural analyses, providing a reliable tool to investigate its unique catalytic mechanisms and biological significance.