Recombinant C27C1 protein (His tag)

Catalog Number	545103
Synonyms	All-trans retinol 3,4-desaturase
Species	Human
Expression System	E. coli
Accession	Q4G0S4
Molecular Weight	Predictes a molecular mass of 54.69 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 55 kDa band.

Product Information

Sequence Region	81-542
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 81-542 aa (Q4G0S4) 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 Cytochrome P450 27C1 (EC 1.14.19.53) Fragment (81-542) is a high-purity, stable protein designed for structural and functional studies. This fragment, derived from human CYP27C1, retains key functional domains and is optimized for biochemical assays, offering researchers a reliable tool to investigate retinol metabolism and vitamin A2 synthesis. Cytochrome P450 27C1 (CYP27C1) is a mitochondrial membrane-associated monooxygenase that catalyzes the 3,4-desaturation of all-trans-retinol (vitamin A1) to all-trans-3,4-didehydroretinol (vitamin A2) in human skin. This enzyme utilizes molecular oxygen and NADPH via the mitochondrial electron transfer system involving FDXR and FDX1/FDX2, playing a critical role in vitamin A metabolism. Its activity extends to all-trans retinal and all-trans retinoic acid with lower efficiency, and it minimally produces 3-hydroxy and 4-hydroxy retinol derivatives. The protein localizes to the mitochondrial membrane as a peripheral membrane protein, underscoring its importance in cellular redox processes and retinoid signaling pathways.