Recombinant RDH10 protein (His tag)

Catalog Number	547712
Synonyms	Short chain dehydrogenase/reductase family 16C member 4
Species	Human
Expression System	E. coli
Accession	Q8IZV5
Molecular Weight	Predictes a molecular mass of 37.15 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band.

Product Information

Sequence Region	24-341
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 24-341 aa (Q8IZV5) 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 Retinol Dehydrogenase 10 (RDH10) Fragment (aa 24-341) is a high-purity protein designed for structural and biochemical studies. This 318-amino acid fragment retains the enzyme's NADP-dependent retinol dehydrogenase activity, efficiently converting all-trans-retinol to all-trans-retinal, making it an ideal tool for investigating retinoid metabolism and enzyme kinetics. Retinol Dehydrogenase 10 (RDH10) is a member of the short-chain dehydrogenase/reductase family 16C, specifically catalyzing the oxidation of all-trans-retinol to all-trans-retinal using NADP as a cofactor. This reaction represents the rate-limiting step in retinoic acid synthesis, playing a crucial role in vitamin A metabolism and signaling pathways. The enzyme demonstrates strict substrate specificity, showing no activity toward cis-retinol isomers. RDH10 is localized to microsomal and endoplasmic reticulum membranes as a single-pass membrane protein, where it functions in retinol processing. The provided fragment (aa 24-341) represents a stable, soluble unit optimized for experimental applications while maintaining the protein's fundamental catalytic properties.