Recombinant AK1BF protein (His tag)

Catalog Number	537129
Synonyms	Estradiol 17-beta-dehydrogenase AKR1B15; Farnesol dehydrogenase; Testosterone 17beta-dehydrogenase
Species	Human
Expression System	E. coli
Accession	C9JRZ8
Molecular Weight	Predictes a molecular mass of 38.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 41 kDa band.

Product Information

Sequence Region	1-316
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 1-316 aa (C9JRZ8) 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 Aldo-keto reductase family 1 member B15 (AKR1B15) fragment (residues 1-316) is a high-purity, stable protein designed for structural and functional studies. This fragment encompasses the complete functional domain, offering researchers a soluble and active unit for investigating its diverse enzymatic activities, including NADPH-dependent reduction of carbonyl compounds, retinoids, and steroid hormones. AKR1B15 is a human enzyme with broad substrate specificity, catalyzing the NADPH-dependent reduction of aromatic aldehydes, alkenals, ketones, alpha-dicarbonyl compounds, and retinoids such as all-trans-retinal and 9-cis-retinal. It also exhibits 17-beta-hydroxysteroid dehydrogenase activity, reducing androgens and estrogens with high positional selectivity, and acts on 3-keto-acyl-CoAs. Isoform 1, localized to the mitochondrion, is implicated in retinoid metabolism, while isoform 2, found in the cytosol, lacks observed oxidoreductase activity. This protein plays a critical role in metabolic pathways involving carbonyl detoxification, steroid hormone regulation, and potential retinoid homeostasis.