Recombinant DHB3 protein (His tag)

Catalog Number	546946
Synonyms	17-beta-HSD 3; Estradiol 17-beta-dehydrogenase 2; Short chain dehydrogenase/reductase family 12C member 2; Testicular 17-beta-hydroxysteroid dehydrogenase; Testosterone 17-beta-dehydrogenase 3
Species	Human
Expression System	E. coli
Accession	P37058
Molecular Weight	Predictes a molecular mass of 36.17 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	1-310
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1-310 aa (P37058) 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	This recombinant protein product features a stable, soluble fragment (amino acids 1-310) of human 17-beta-hydroxysteroid dehydrogenase type 3 (17-beta-HSD 3), a key enzyme in testosterone biosynthesis. The carefully selected fragment maintains structural integrity and functionality, making it ideal for biochemical assays, enzyme kinetics studies, and structural investigations of androgen metabolism pathways. 17-beta-hydroxysteroid dehydrogenase type 3 is a crucial endoplasmic reticulum-localized enzyme that catalyzes the conversion of 17-oxosteroids to 17beta-hydroxysteroids, with a strong preference for reducing androstenedione to testosterone. As the primary enzyme responsible for testosterone production, 17-beta-HSD 3 plays a fundamental role in male development and function. The enzyme demonstrates unique cofactor specificity, utilizing NADPH rather than NADH used by other EDH17B family members. Beyond its primary substrate, 17-beta-HSD 3 can process various androgens including epiandrosterone, dehydroepiandrosterone, androsterone, and androstanedione, as well as 11-ketoandrostenedione and 11beta-hydroxyandrostenedione, highlighting its broad substrate specificity in steroid hormone metabolism.