Recombinant DHI2 protein (His tag)

Catalog Number	540132
Synonyms	11-DH2; 11-beta-HSD2; 11-beta-hydroxysteroid dehydrogenase type II; 11-HSD type II; 11-beta-HSD type II; Corticosteroid 11-beta-dehydrogenase isozyme 2; NAD-dependent 11-beta-hydroxysteroid dehydrogenase; Short chain dehydrogenase/reductase family 9C member 3
Species	Human
Expression System	E. coli
Accession	P80365
Molecular Weight	Predictes a molecular mass of 45.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 46 kDa band.

Product Information

Sequence Region	1-405
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 1-405 aa (P80365) 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 11-beta-Hydroxysteroid Dehydrogenase Type 2 (11β-HSD2) Fragment (amino acids 1-405) is a high-purity, stable protein designed for structural and biochemical studies. This fragment encompasses the full-length functional domain, enabling researchers to investigate its critical role in glucocorticoid metabolism and mineralocorticoid receptor protection with enhanced solubility and experimental reliability. 11-beta-Hydroxysteroid Dehydrogenase Type 2 (HSD11B2) is an NAD+-dependent enzyme that catalyzes the conversion of active 11β-hydroxyglucocorticoids, such as cortisol, to inactive 11-ketoglucocorticoids like cortisone. This dehydrogenase activity is essential for protecting the nonselective mineralocorticoid receptor from glucocorticoid occupation, maintaining glucocorticoid balance during fetal development, and regulating immune cell migration through the metabolism of oxysterols like 7β,25-dihydroxycholesterol. The enzyme also oxidizes 11β-hydroxytestosterone to 11-ketotestosterone, a key bioactive androgen. Located primarily in the endoplasmic reticulum and microsomes, HSD11B2 plays a vital role in shielding reproductive cells from cortisol's adverse effects and ensuring hormonal homeostasis.