Recombinant THAS protein (His tag)

Catalog Number	546868
Synonyms	TXA synthase; TXS; Cytochrome P450 5A1; Hydroperoxy icosatetraenoate dehydratase
Species	Human
Expression System	E. coli
Accession	P24557
Molecular Weight	Predictes a molecular mass of 12.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	245-335
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 245-335 aa (P24557) 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	Introducing the recombinant human Thromboxane-A Synthase (TXA Synthase) fragment (residues 245-335), a highly stable and soluble protein unit ideal for structural biology and enzymatic studies. This fragment, derived from the critical enzyme responsible for thromboxane A2 synthesis, offers researchers a reliable tool to investigate platelet aggregation and vascular constriction mechanisms without the complexities of the full-length membrane protein. Thromboxane-A Synthase (TXA Synthase), encoded by the TBXAS1 gene in humans, is a multifunctional cytochrome P450 enzyme localized to the endoplasmic reticulum membrane. It primarily catalyzes the conversion of prostaglandin H2 (PGH2) to thromboxane A2 (TXA2), a potent mediator of blood vessel constriction and platelet aggregation—key processes in hemostasis and thrombosis. Additionally, the enzyme produces 12-hydroxy-heptadecatrienoic acid (12-HHT) and malondialdehyde as stoichiometric byproducts, with the latter implicated in DNA damage pathways. TXA Synthase also exhibits dehydratase activity, metabolizing (15S)-hydroperoxy-eicosatetraenoate to 15-KETE and 15-HETE, highlighting its role in eicosanoid signaling. The full-length protein's membrane-associated nature underscores its importance in cellular lipid metabolism, making this soluble fragment a valuable surrogate for probing its biochemical functions.