Recombinant THTM protein (His tag)

Catalog Number	544509
Synonyms	MST
Species	Human
Expression System	E. coli
Accession	P25325
Molecular Weight	Predictes a molecular mass of 34.70 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	2-297
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 2-297 aa (P25325) 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 3-mercaptopyruvate sulfurtransferase (MST) Fragment (aa 2-297) – a high-purity protein tool designed for studying the complete Rhodanese domains and their roles in sulfur transfer, cyanide detoxification, and hydrogen sulfide production. Human 3-mercaptopyruvate sulfurtransferase (MST), encoded by the MPST gene, catalyzes the transfer of sulfur ions to cyanide or thiol compounds, contributing to cyanide detoxification and thiosulfate biosynthesis. It functions as an antioxidant and, in conjunction with cysteine aminotransferase (CAT), facilitates cysteine catabolism and hydrogen sulfide (H_2S) production in the brain, retina, and vascular endothelial cells. H_2S serves as a critical synaptic modulator, signaling molecule, smooth muscle contractor, and neuroprotectant, with its generation via the 3MST/CAT pathway regulated by calcium ions. The protein localizes to the cytoplasm, mitochondria, and synaptic synaptosomes, underscoring its diverse physiological relevance.