Recombinant THTR protein (His tag)

Catalog Number	542760
Synonyms	Rhodanese
Species	Human
Expression System	E. coli
Accession	Q16762
Molecular Weight	Predictes a molecular mass of 34.95 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	>87%, 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 (Q16762) 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 Thiosulfate sulfurtransferase (Rhodanese) fragment (aa 2-297) is a high-purity protein designed for studying iron-sulfur complex formation, cyanide detoxification, and mitochondrial 5S rRNA import. This fragment fully encompasses the functional Rhodanese 1 and Rhodanese 2 domains, making it an ideal tool for domain-specific functional investigations. Thiosulfate sulfurtransferase (TST), also known as Rhodanese, is a mitochondrial matrix enzyme in humans that plays crucial roles in cellular metabolism and detoxification. Its primary functions include the formation of iron-sulfur complexes, cyanide detoxification, and modification of sulfur-containing enzymes. The enzyme can utilize various thiol compounds as sulfur ion acceptors beyond cyanide and exhibits weak mercaptopyruvate sulfurtransferase activity. Additionally, TST collaborates with MRPL18 as a mitochondrial import factor for cytosolic 5S rRNA, where only the nascent unfolded cytoplasmic form binds to the RNA. These diverse functions highlight the protein's significance in mitochondrial function, cellular detoxification pathways, and RNA import mechanisms.