Recombinant GSTA3 protein (His tag)

Catalog Number	542761
Synonyms	GST class-alpha member 3; Glutathione S-transferase A3-3
Species	Human
Expression System	E. coli
Accession	Q16772
Molecular Weight	Predictes a molecular mass of 26.82 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	2-222
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 2-222 aa (Q16772) 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 Glutathione S-transferase A3 (GSTA3) fragment (amino acids 2-222) from Homo sapiens, engineered to encompass the complete GST N-terminal and C-terminal domains. This high-purity protein is an essential tool for investigating glutathione conjugation, steroid hormone biosynthesis, and detoxification pathways in cellular and biochemical assays. Glutathione S-transferase A3 (GSTA3) is a cytoplasmic enzyme that catalyzes the conjugation of reduced glutathione to diverse hydrophobic electrophiles, playing a critical role in cellular detoxification and metabolism. It is particularly significant for its isomerization activity in steroid hormone biosynthesis, facilitating the conversion of precursors such as delta(5)-androstene-3,17-dione and delta(5)-pregnene-3,20-dione to testosterone and progesterone, respectively. Additionally, GSTA3 demonstrates activity toward carcinogenic compounds like aflatoxin B1-8,9-epoxide, underscoring its importance in xenobiotic metabolism and toxicology research. The enzyme's localization in the cytoplasm ensures its accessibility for studying intracellular defense mechanisms against electrophilic stressors.