Recombinant KITM protein (His tag)

Catalog Number	546394
Synonyms	2'-deoxyuridine kinase TK2; Deoxycytidine kinase TK2; Mt-TK
Species	Human
Expression System	E. coli
Accession	O00142
Molecular Weight	Predictes a molecular mass of 27.26 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	49-265
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 49-265 aa (O00142) 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	This product is a recombinant fragment of human Thymidine kinase 2, mitochondrial (TK2), encompassing amino acids 49-265. It is designed for structural and biochemical studies, offering a stable and soluble unit of this key mitochondrial enzyme involved in nucleotide phosphorylation and mitochondrial DNA synthesis. Thymidine kinase 2 (TK2) is a mitochondrial enzyme that phosphorylates thymidine, deoxycytidine, and deoxyuridine within the mitochondrial matrix. In non-replicating cells, where cytosolic dNTP synthesis is down-regulated, mitochondrial DNA synthesis relies entirely on TK2 and deoxyguanosine kinase (DGUOK). Due to its critical role in nucleotide metabolism, TK2 is a well-established target for antiviral and chemotherapeutic agents. The enzyme is localized exclusively in the mitochondrion, underscoring its importance in maintaining mitochondrial genomic integrity.