

Active Recombinant Human TK1 Protein, His-tagged

Cat. No. TK1-08H Lot. No. (See product label)

SPECIFICATION

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| Product Overview | Recombinant Human TK1 Protein, fused to His-tag, was expressed in E. coli. |
| Species | Human |
| Source | E.coli |
| Description | The protein encoded by this gene is a cytosolic enzyme that catalyzes the addition of a gamma-phosphate group to thymidine. This creates dTMP and is the first step in the biosynthesis of dTTP, which is one component required for DNA replication. The encoded protein, whose levels fluctuate depending on the cell cycle stage, can act as a low activity dimer or a high activity tetramer. High levels of this protein have been used as a biomarker for diagnosing and categorizing many types of cancers. |
| Form | Supplied as a 0.2 µm filtered solution in Tris, NaCl, Glycerol, Brij-30 and DTT. |
| Bio-activity | Measured by its ability to phosphorylate thymidine. The specific activity is >550 pmol/min/µg |
| Molecular Mass | Predicted Molecular Mass: 26 kDa SDS-PAGE: 25-30 kDa, reducing conditions |
| N-terminal Sequence Analysis | Ser2 & Cys3 |
| Endotoxin | <0.1 EU per 1 µg of the protein by the LAL method. |

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| Purity | >80% |
| Applications | Enzyme Activity |
| Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 6 months from date of receipt, -70 centigrade as supplied. 3 months, -70 centigrade under sterile conditions after opening. |
| Shipping | The product is shipped with dry ice or equivalent. Upon receipt, store it immediately at the temperature recommended below. |

GENE INFORMATION

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| Gene Name | TK1 thymidine kinase 1 [Homo sapiens (human)] |
| Official Symbol | TK1 |
| Synonyms | EC 2.7.1.21; TK1; TK2; Thymidine Kinase 1; thymidine kinase 1 soluble isoform; thymidine kinase 1; thymidine kinase; cytosolic; thymidine kinase-1 |
| Gene ID | 7083 |
| mRNA Refseq | NM_003258 |
| Protein Refseq | NP_003249 |
| MIM | 188300 |
| UniProt ID | P04183 |

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