

## Recombinant Human TK1 protein, His & GST-tagged

**Cat. No.** TK1-8093H    **Lot. No.** (See product label)

### SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Overview</b> | Recombinant Human TK1 aa. (Ser2~Asn234) fused with N-terminal His & GST tag was produced in E. coli cells.                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>ProteinLength</b>    | Ser2~Asn234                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | 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. |
| <b>Form</b>             | Freeze-dried powder                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Molecular Mass</b>   | 55kDa as determined by SDS-PAGE reducing conditions.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Endotoxin</b>        | <1.0EU per 1ug (determined by the LAL method)                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Purity</b>           | >95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Characteristic</b>   | The isoelectric point is 8.9.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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|                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications</b>   | SDS-PAGE; WB; ELISA; IP; CoIP; Purification; Amine Reactive Labeling                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Stability</b>      | The thermal stability is described by the loss rate of the target protein. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. (Referring from China Biological Products Standard, which was calculated by the Arrhenius equation.) The loss of this protein is less than 5% within the expiration date under appropriate storage condition. |
| <b>Storage</b>        | Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.                                                                                                                                                                                                                                                                                                                                                                |
| <b>Concentration</b>  | 200µg/mL                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Storage Buffer</b> | 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% sarcosyl, 5%Trehalose and Proclin300.                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Reconstitution</b> | Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                                                                                                                                                                                                                                                                                                                                         |

## GENE INFORMATION

|                        |                                                                      |
|------------------------|----------------------------------------------------------------------|
| <b>Gene Name</b>       | TK1 thymidine kinase 1 [ Homo sapiens (human) ]                      |
| <b>Official Symbol</b> | TK1                                                                  |
| <b>Synonyms</b>        | TK2; thymidine kinase 1 soluble isoform; thymidine kinase, cytosolic |
| <b>Gene ID</b>         | 7083                                                                 |
| <b>mRNA Refseq</b>     | NM_001346663.1                                                       |

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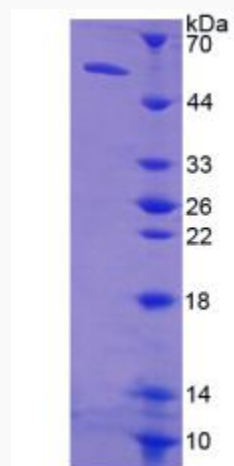
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Protein Refseq NP\_001333592.1

UniProt ID P04183

SDS-PAGE



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