

## CSNK1G1 Protein, Human, Recombinant (His & GST)

### General Information

Synonyms:	CK1 $\gamma$ 1;casein kinase 1, gamma 1;casein kinase 1, $\gamma$ 1;CK1gamma1
Protein Construction:	A DNA sequence encoding full length of human CSNK1G1 (NP_071331.2) (Met 1-Lys 422) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q9HCP0
Molecular Weight:	76.3 kDa (predicted); 66 kDa (reducing conditions)

### QC Testing

Biological Activity:	The specific activity was determined to be 4 nmol/min/mg using casein as substrate.
Purity:	$\geq 90$ % as determined by SDS-PAGE
Endotoxin:	$< 1.0$ EU/ $\mu$ g of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, 10% gly, pH 7.4.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at  $-20^{\circ}\text{C}$  to  $-80^{\circ}\text{C}$ . Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

*Actual storage temperature shall be subject to the COA.*

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

Casein kinase I isoform gamma-1, also known as CSNK1G1, is a member of the protein kinase superfamily, CK1 Ser/Thr protein kinase family and casein kinase I subfamily. The casein kinase I family of protein kinases are serine / threonine-selective enzymes that function as regulators of signal transduction pathways in most eukaryotic cell types. Casein has been used as a substrate since the earliest days of research on protein phosphorylation. Casein kinase activity associated with the endoplasmic reticulum of mammary glands was first characterized in 1974 and its activity was shown to not depend on cyclic AMP. The CKI family of monomeric serine-threonine protein kinases is found in eukaryotic organisms from yeast to human. Mammals have seven family members: alpha, beta 1, gamma 1, gamma 2, gamma 3, delta, and epsilon. The family members have the highest homology in their

kinase domains (53%-98% identical) and differ from most other protein kinases by the presence of the sequence S-I-N instead of A-P-E in kinase domain VIII. The CKI family members appear to have similar substrate specificity and substrate selection is thought to be regulated via subcellular localization and docking sites in specific substrates.

### Reference

- E. Bingham. et al., 1974, Journal of Biological Chemistry. 249: 3647-51.
- Wojciech S. et al., 2004, Journal of Biological Chemistry. 279: 13011-7.
- L. Lum. et al., 2004, Science Volume 304, pages 1755-9.
- R. Takada. et al., 2005, Genes Cells Volume 10: 919-28.
- G. Davidson. et al., 2005, Nature Volume 438: 867-72.

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