

Casein Kinase I alpha Protein, Human (sf9, GST)

Cat. No.:	HY-P72872
Synonyms:	Casein kinase I isoform alpha; CKI-alpha; CK1; CSNK1A1
Species:	Human
Source:	Sf9 insect cells
Accession:	P48729-1 (M1-F337)
Gene ID:	1452
Molecular Weight:	Approximately 62 kDa

PROPERTIES

AA Sequence	<p> M A S S S G S K A E F I V G G K Y K L V R K I G S G S F G D I Y L A I N I T N G E E V A V K L E S Q K A R H P Q L L Y E S K L Y K I L Q G G V G I P H I R W Y G Q E K D Y N V L V M D L L G P S L E D L F N F C S R R F T M K T V L M L A D Q M I S R I E Y V H T K N F I H R D I K P D N F L M G I G R H C N K L F L I D F G L A K K Y R D N R T R Q H I P Y R E D K N L T G T A R Y A S I N A H L G I E Q S R R D D M E S L G Y V L M Y F N R T S L P W Q G L K A A T K K Q K Y E K I S E K K M S T P V E V L C K G F P A E F A M Y L N Y C R G L R F E E A P D Y M Y L R Q L F R I L F R T L N H Q Y D Y T F D W T M L K Q K A A Q Q A A S S S G Q G Q Q A Q T P T G K Q T D K T K S N M K G F </p>
Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, 2 mM GSH, pH 7.4
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

DESCRIPTION

Background	Casein Kinase I alpha, a member of the casein kinase family, is characterized by its preference for acidic substrates such as caseins. Demonstrating versatility, it phosphorylates a diverse array of proteins and actively participates in Wnt signaling by
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phosphorylating CTNNB1 at 'Ser-45.' Additionally, Casein Kinase I alpha may contribute to the phosphorylation of PER1 and PER2, suggesting a potential role in circadian rhythm regulation. Beyond its involvement in cellular signaling pathways, this kinase may play a crucial role in chromosome segregation during mitosis and regulate epithelial cell migration by influencing keratin cytoskeleton disassembly. Furthermore, Casein Kinase I alpha acts as a positive regulator of mTORC1 and mTORC2 signaling in response to nutrient stimuli, mediating the phosphorylation of the DEPTOR inhibitor. In another context, it functions as an inhibitor of NLRP3 inflammasome assembly through the phosphorylation of NLRP3, highlighting its diverse roles in cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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