

CSNK2A2 Protein, Human (His-SUMO)

Cat. No.:	HY-P700596
Synonyms:	Casein kinase 2 alpha 1 polypeptide; Casein kinase II alpha 1; Casein kinase II alpha 1 subunit; Casein kinase II alpha subunit; Casein kinase II subunit alpha; CK II alpha; CK II; CK2 alpha; CK2 catalytic subunit alpha; CK2A1; CKII; CKIIalpha; CSK21_HUMAN; CSNK2A1
Species:	Human
Source:	E. coli
Accession:	P68400 (R8-N350)
Gene ID:	1457
Molecular Weight:	56.7 kDa

PROPERTIES

AA Sequence

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R A R V Y T D V N T   H R P R E Y W D Y E   S H V V E W G N Q D   D Y Q L V R K L G R
G K Y S E V F E A I   N I T N N E K V V V   K I L K P V K K K K   I K R E I K I L E N
L R G G P N I I T L   A D I V K D P V S R   T P A L V F E H V N   N T D F K Q L Y Q T
L T D Y D I R F Y M   Y E I L K A L D Y C   H S M G I M H R D V   K P H N V M I D H E
H R K L R L I D W G   L A E F Y H P G Q E   Y N V R V A S R Y F   K G P E L L V D Y Q
M Y D Y S L D M W S   L G C M L A S M I F   R K E P F F H G H D   N Y D Q L V R I A K
V L G T E D L Y D Y   I D K Y N I E L D P   R F N D I L G R H S   R K R W E R F V H S
E N Q H L V S P E A   L D F L D K L L R Y   D H Q S R L T A R E   A M E H P Y F Y T V
V K D Q A R M G S S   S M P G G S T P V S   S A N
  
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Biological Activity The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.

Appearance Lyophilized powder.

Formulation Lyophilized from a 0.2 µm filtered solution of Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Endotoxin Level <1 EU/µg, determined by LAL method.

Reconstitution It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH₂O.

Storage & Stability Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

The catalytic subunit of CSNK2A2 protein functions as a core component of a constitutively active serine/threonine-protein kinase complex, showcasing a broad substrate specificity for acidic residues C-terminal to the phosphorylated serine or

threonine. Operating as a regulatory node, CSNK2A2 plays a pivotal role in diverse cellular processes, including cell cycle progression, apoptosis, transcription, and viral infection. It contributes to the p53/TP53-dependent spindle assembly checkpoint during mitosis, maintaining cyclin-B-CDK1 activity and G2 arrest in response to spindle damage. Additionally, CSNK2A2 is implicated in apoptotic regulation, phosphorylating key players like caspases and NOL3. Its influence extends to transcriptional regulation, with direct phosphorylation of RNA polymerases and numerous transcription factors. In the intricate landscape of cellular signaling, CSNK2A2 participates in Wnt signaling, acts as an ectokinase for extracellular proteins, and phosphorylates various proteins involved in the viral life cycles of diverse viruses. Moreover, it plays a crucial role in the circadian clock function and contributes to the formation of a membraneless compartment by phosphorylating FMR1. Overall, CSNK2A2 emerges as a central orchestrator of cellular responses to diverse stimuli, showcasing its significance in maintaining cellular homeostasis.

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

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