

CK2 alpha/CSNK2A2 Protein, Human (sf9)

Cat. No.:	HY-P76296
Synonyms:	Casein kinase II subunit alpha'; CK II alpha'; CSNK2A2; CK2A2
Species:	Human
Source:	Sf9 insect cells
Accession:	P19784 (N-G&P, M1-R350)
Gene ID:	1459
Molecular Weight:	Approximately 39 kDa.

PROPERTIES

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, 3 mM DTT, pH 8.5.
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

CSNK2A2, the catalytic subunit of a constitutively active serine/threonine-protein kinase complex, plays a pivotal role in phosphorylating a diverse array of substrates with acidic residues located C-terminal to the phosphorylated serine or threonine. This versatile protein regulator is involved in regulating critical cellular processes, including cell cycle progression, apoptosis, and transcription, as well as influencing viral infection. Acting as a central regulatory node, CSNK2A2 integrates and coordinates various signals, orchestrating an appropriate cellular response. During mitosis, it functions within the p53/TP53-dependent spindle assembly checkpoint, preserving cyclin-B-CDK1 activity and inducing G2 arrest in response to spindle damage. Furthermore, CSNK2A2 is essential for p53/TP53-mediated apoptosis, phosphorylating 'Ser-392' of p53/TP53 after UV irradiation, and it exerts a negative regulatory effect on apoptosis. Notably, CSNK2A2 displays a broad impact on cellular signaling, phosphorylating caspases, apoptotic regulator NOL3, RNA polymerases, and numerous transcription factors. Its influence extends to molecular chaperones, such as Hsp90 and its co-chaperones, highlighting its essential role in chaperone function. Additionally, CSNK2A2 regulates Wnt signaling, acts as an ectokinase for extracellular proteins, and exerts its influence during viral infection by phosphorylating proteins involved in the life cycles of various viruses, underscoring its multifaceted and crucial role in cellular homeostasis.

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

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