Recombinant CSK22 protein (His tag)

Catalog Number	546820
Synonyms	CK II alpha'
Species	Human
Expression System	E. coli
Accession	P19784
Molecular Weight	Predictes a molecular mass of 42.87 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	1-350
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-350 aa (P19784) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Casein Kinase II Subunit Alpha' (CK II alpha') Fragment (residues 1-350) is a high-purity, catalytically active protein designed for studying serine/threonine kinase activity. This fragment fully encompasses the essential protein kinase domain, making it an ideal tool for investigating phosphorylation mechanisms, cellular signaling pathways, and drug discovery applications. Casein Kinase II Subunit Alpha' (encoded by CSNK2A2) is a constitutively active serine/threonine-protein kinase that phosphorylates substrates containing acidic residues C-terminal to the phosphorylated residue. This multifunctional enzyme regulates numerous critical cellular processes including cell cycle progression, apoptosis, transcription, DNA damage response, and viral infection. It functions as a regulatory node integrating multiple cellular signals and participates in key pathways such as the p53-dependent spindle assembly checkpoint during mitosis. The kinase phosphorylates diverse targets including transcription factors (NF-kappa-B, STAT1, CREB1), DNA repair proteins (MDC1, RAD51), apoptotic regulators (caspases, NOL3), and viral proteins. CK II alpha' localizes to both the nucleus and cytoplasm, with nuclear translocation regulated by interaction with SIRT6. Its broad substrate specificity and constitutive activity make it a crucial regulator of cellular homeostasis and an important target for therapeutic development.