

Datasheet for ABIN7553249
CHEK2 Protein (AA 1-543) (His tag)



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Overview

Quantity:	1 mg
Target:	CHEK2
Protein Characteristics:	AA 1-543
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CHEK2 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat CHEK2 Protein expressed in mammalian cells.
Sequence:	<p>MSRES DVEAQ QSHGSSACSQ PHGSVTQSQG SSSQSQGISS SSTSTMPNSS QSSHSSSGTL SSLETVSTQE LYSIPEDQEP EDQEPEEPTP APWARLWALQ DGFANLECVN DNYWFGDRDKS CEYCFDEPLL KRTDKYRTYS KKHFRIFREV GPKNSYIAYI EDHSGNGTFV NTELVGKGR RPLNNNSEIA LLSRNKVFV FFDLTVDDQS VYPKALRDEY IMSKTLGSGA CGEVKLAFER KTCKKVAIKI ISKRKFAIGS AREADPALNV ETEIEILKKL NHPCIIKIKN FFDAEDYYIV LELMEGGELF DKVVGKRLK EATCKLYFYQ MLLAVQYLHE NGIIHRDLKP ENVLLSSQEE DCLIKITDFG HSKILGETSL MRTLCGTPTY LAPEVLVSVG TAGYNRAVDC WSLGVILFIC LSGYPPFSEH RTQVSLKQDI TSGKYNFIPE VVAEVSEKAL DLVKKLLVVD PKARFTTEEA LRHPWLQDED MKRKFQDLLS EENESTALPQ VLAQPSTSRK RPREGEAEGA ETTKRPVCA AVL Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you</p>

Product Details

have a special request, please contact us.

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

Grade:

custom-made

Target Details

Target:

CHEK2

Alternative Name:

CHEK2 ([CHEK2 Products](#))

Background:

Serine/threonine-protein kinase Chk2 (EC 2.7.11.1) (CHK2 checkpoint homolog) (Cds1 homolog) (Hucds1) (hCds1) (Checkpoint kinase 2),FUNCTION: Serine/threonine-protein kinase which is required for checkpoint-mediated cell cycle arrest, activation of DNA repair and apoptosis in response to the presence of DNA double-strand breaks. May also negatively regulate cell cycle progression during unperturbed cell cycles. Following activation, phosphorylates numerous effectors preferentially at the consensus sequence [L-X-R-X-X-S/T]. Regulates cell cycle checkpoint arrest through phosphorylation of CDC25A, CDC25B and CDC25C, inhibiting their activity. Inhibition of CDC25 phosphatase activity leads to increased inhibitory tyrosine phosphorylation of CDK-cyclin complexes and blocks cell cycle progression. May also phosphorylate NEK6 which is involved in G2/M cell cycle arrest. Regulates DNA repair through phosphorylation of BRCA2, enhancing the association of RAD51 with chromatin which promotes DNA repair by homologous recombination. Also stimulates the transcription of genes

Target Details

involved in DNA repair (including BRCA2) through the phosphorylation and activation of the transcription factor FOXM1. Regulates apoptosis through the phosphorylation of p53/TP53, MDM4 and PML. Phosphorylation of p53/TP53 at 'Ser-20' by CHEK2 may alleviate inhibition by MDM2, leading to accumulation of active p53/TP53. Phosphorylation of MDM4 may also reduce degradation of p53/TP53. Also controls the transcription of pro-apoptotic genes through phosphorylation of the transcription factor E2F1. Tumor suppressor, it may also have a DNA damage-independent function in mitotic spindle assembly by phosphorylating BRCA1. Its absence may be a cause of the chromosomal instability observed in some cancer cells. Promotes the CCAR2-SIRT1 association and is required for CCAR2-mediated SIRT1 inhibition (PubMed:25361978). {ECO:0000250|UniProtKB:Q9Z265, ECO:0000269|PubMed:10097108, ECO:0000269|PubMed:10724175, ECO:0000269|PubMed:11298456, ECO:0000269|PubMed:12402044, ECO:0000269|PubMed:12607004, ECO:0000269|PubMed:12717439, ECO:0000269|PubMed:12810724, ECO:0000269|PubMed:16163388, ECO:0000269|PubMed:17101782, ECO:0000269|PubMed:17380128, ECO:0000269|PubMed:17715138, ECO:0000269|PubMed:18317453, ECO:0000269|PubMed:18644861, ECO:0000269|PubMed:18728393, ECO:0000269|PubMed:20364141, ECO:0000269|PubMed:25361978, ECO:0000269|PubMed:25619829, ECO:0000269|PubMed:9836640, ECO:0000269|PubMed:9889122}., FUNCTION: (Microbial infection) Phosphorylates herpes simplex virus 1/HHV-1 protein ICP0 and thus activates its SUMO-targeted ubiquitin ligase activity. {ECO:0000269|PubMed:32001251}.

Molecular Weight: 60.9 kDa

UniProt: [O96017](#)

Pathways: [p53 Signaling](#), [Apoptosis](#), [Cell Division Cycle](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Restrictions: For Research Use only

Handling

Format: Liquid

Handling

Buffer: The buffer composition is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Expiry Date: 12 months