Recombinant Human Cell Division Cycle 7 Homolog (S. cerevisiae), GST-tagged

Cat. No. CDC7-997H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full-length human CDC7 was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.
Species	Human
Source	Sf9 Cells
Description	CDC7 is a cell division cycle protein that is critical for the G1/S transition and initiation of DNA replication during the cell division cycle. Overexpression of CDC7 gene product may be associated with neoplastic transformation for some tumors. Inhibition of CDC7 in cancer cells impairs progression through S phase, inducing a p53-independent apoptotic cell death, whereas in normal cells, it does not affect cell viability. Inhibition of CDC7 kinase activity in cancer cells restricts DNA replication and induces apoptosis. CDC7 phosphorylates the minichromosome maintenance protein 2 (Mcm2), a component of the DNA replicative helicase needed for genome duplication.
Applications	Western Blot
Molecular Weight	94 kDa
Expression System	Sf9 insect cells using baculovirus
Form	Recombinant protein stored in 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM

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	glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25 % glycerol.
Purity	> 70 %
Concentration	0.2 ug/ul
Sequences	Full-length
Storage	Store product at -70°C. For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.
Pathways	Activation of ATR in response to replication stress; Activation of the pre-replicative complex; Cell Cycle Checkpoints; Cell Cycle; Cell cycle; DNA Replication; G1/S Transition; G2/M Checkpoints; M/G1 Transition; Mitotic G1-G1/S phases; Mitotic M-M/G1 phases

GENE INFORMATION

Gene Name	CDC7 cell division cycle 7 homolog (S. cerevisiae) [Homo sapiens]
Official Symbol	CDC7
Synonyms	CDC7; cell division cycle 7 homolog (S. cerevisiae); CDC7L1; Hsk1; CDC7 (cell division cycle 7, S. cerevisiae, homolog)-like 1; HsCdc7; huCdc7; CDC7-related kinase; CDC7 cell division cycle 7 (S. cerevisiae); cell division cycle 7 (S. cerevisiae); HsCDC7; MGC117361; MGC126237; MGC126238; cell division cycle 7-like protein 1; cell division cycle 7-related protein kinase; huCDC7; EC 2.7.11.1
Gene ID	8317

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mRNA Refseq	NM_003503
Protein Refseq	NP_003494
MIM	603311
UniProt ID	O00311
Chromosome Location	1p22
Function	ATP binding; kinase activity; metal ion binding; nucleotide binding; protein serine/threonine kinase activity

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