CDK2 cDNA Clone – Cyclin-Dependent Kinase 2 (Human)

PRODUCT OVERVIEW

Product Name	CDK2, cDNA Clone
Full Product Name	CDK2 cDNA Clone
Product Gene Name	CDK2 cdna clone
Sequence	atggagaact tccaaaaggt ggaaaagatc ggagagggca cgtacggagt tgtgtacaaa gccagaaaca agttgacggg agaggtggtg gcgcttaaga aaatccgcct ggacactgag actgagggtg tgcccagtac tgccatccga gagatctctc tgcttaagga gcttaaccat cctaatattg tcaagctgct ggatgtcatt cacacagaaa ataaactcta cctggttttt gaatttctgc accaagatct caagaaattc atggatgcct ctgctctcac tggcattcct cttcccctca tcaagagcta tctgttccag ctgctccagg gcctagcttt ctgccattct catcgggtcc tccaccgaga ccttaaacct cagaatctgc ttattaacac agaggggggc atcaagctag cagactttgg actagccaga gcttttggag tccctgttcg tacttacacc catgaggtgg tgaccctgtg gtaccgagct cctgaaatcc tcctgggctg caaatattat tccacagctg tggacatctg gagcctgggc tgcatctttg ctgagatggt gactcgccgg gccctattcc ctggagattc tgagattgac cagctcttcc ggatctttcg gactctgggg accccagatg aggtggtgtg gccaggagtt acttctatgc ctgattacaa gccaagtttc cccaagtggg cccggcaaga ttttagtaaa gttgtacctc ccctggatga agatggacgg agcttgttat cgcaaatgct gcactacgac cctaacaagc ggatttcggc caaggcagcc ctggctcacc ctttcttcca ggatgtgacc aagccagtac cccatcttcg actctga
Molecular Weight	30,035 Da
OMIM	116953
Vector	pENTR223.1 or pUC
Clone Sequence Report	Provided with product shipment
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for CDK2 cdna clone	MBS1272308 is a cDNA clone targeting CDK2.
Other Notes	Small volumes of CDK2 cdna clone vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDK2. It may not necessarily be applicable to this product.

NCBI GI #	33869456
NCBI GeneID	1017
NCBI Accession #	BC003065
UniProt Secondary Accession #	O75100; A8K7C6
UniProt Related Accession #	P24941
NCBI Official Full Name	Homo sapiens cyclin-dependent kinase 2, mRNA
NCBI Official Synonym Full Names	cyclin dependent kinase 2
NCBI Official Symbol	CDK2
NCBI Official Synonym Symbols	CDKN2; p33(CDK2)
UniProt Protein Name	Cyclin-dependent kinase 2
UniProt Synonym Protein Names	Cell division protein kinase 2; p33 protein kinase

Protein Family	Cyclin-dependent kinase
UniProt Gene Name	CDK2
UniProt Synonym Gene Names	CDKN2
UniProt Entry Name	CDK2_HUMAN
NCBI Protein Information	cyclin-dependent kinase 2
NCBI Summary for CDK2	This gene encodes a member of a family of serine/threonine protein kinases that participate in cell cycle regulation. The encoded protein is the catalytic subunit of the cyclin-dependent protein kinase complex, which regulates progression through the cell cycle. Activity of this protein is especially critical during the G1 to S phase transition. This protein associates with and regulated by other subunits of the complex including cyclin A or E, CDK inhibitor p21Cip1 (CDKN1A), and p27Kip1 (CDKN1B). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Mar 2014]
UniProt Comments for CDK2	CDK2: a protein kinase of the CDK family. An important component of the cell cycle machinery. Activity of CDK2 is maximal during S phase and G2. Cdk2/cyclin E kinase activity is important for the G1 to S transition and phosphorylates the Rb protein. In S-phase, active cdk2/cyclin A complexes predominate and phosphorylate E2F, and the active cdk2 complex persists in the nucleus through G2. Part of the Rb pathway disregulated in most tumors. Target of several candidate cancer drugs. However, inhibition does not always prevent cancer cell growth, possibly due to CDK redundancy. Inhibitors: BMS-265246, BMS-265246-01, R-roscovitine (CYC200, CYC202), SU9516, R547, L868276 Protein type: CDK family; CDK/CDK1 subfamily; CDK1 subfamily; CMGC group; Cell cycle regulation; EC 2.7.11.22; Kinase, protein; Protein kinase, CMGC; Protein kinase, Ser/Thr (non-receptor) Chromosomal Location of Human Ortholog: 12q13 Cellular Component: Cajal body; centrosome; cyclin-dependent protein kinase holoenzyme complex; cytoplasm; cytosol; endosome; nucleoplasm; nucleus Molecular Function: cyclin binding; cyclin-dependent protein kinase activity; histone kinase activity; kinase activity; protein binding; protein serine/threonine kinase activity Biological Process: centriole replication; centrosome duplication; DNA damage response, signal transduction by p53 class mediator resulting in cell cycle arrest; DNA replication; G1 DNA damage checkpoint; G1/S transition of mitotic cell cycle; G2/M transition of mitotic cell cycle; meiosis; negative regulation of ubiquitin-protein ligase activity during mitotic cell cycle; peptidyl-serine phosphorylation; positive regulation of cell proliferation; Ras protein signal transduction; regulation of ubiquitin-protein ligase activity during mitotic cell cycle
Research Articles on CDK2	**1.** Foxo3 circular RNA retards cell cycle progression via forming ternary complexes with p21 and CDK2.
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