CLK2 cDNA Clone – CDC-Like Kinase 2 (Human)

PRODUCT OVERVIEW

Product Name	CLK2, cDNA Clone
Full Product Name	CLK2 cDNA Clone
Product Gene Name	CLK2 cdna clone
Sequence	atgccgcatc ctcgaaggta ccactcctca gagcgaggca gccgggggag ttaccgtgaa cactatcgga gccgaaagca taagcgacga agaagtcgct cctggtcaag tagtagtgac cggacacgac ggcgtcggcg agaggacagc taccatgtcc gttctcgaag cagttatgat gatcgttcgt ccgaccggag ggtgtatgac cggcgatact gtggcagcta cagacgcaac gattatagcc gggatcgggg agatgcctac tatgacacag actatcggca ttcctatgaa tatcagcggg agaacagcag ttaccgcagc cagcgcagca gccggaggaa gcacagacgg cggaggaggc gcagccggac atttagccgc tcatcttcgc agcacagcag ccggagagcc aagagtgtag aggacgacgc tgagggccac ctcatctacc acgtcgggga ctggctacaa gagcgatatg aaatcgttag caccttagga gaggggacct tcggccgagt tgtacaatgt gttgaccatc gcaggggtgg ggctcgagtt gccctgaaga tcattaagaa tgtggagaag tacaaggaag cagctcgact tgagatcaac gtgctagaga aaatcaatga gaaagaccct gacaacaaga acctctgtgt ccagatgttt gactggtttg actaccatgg ccacatgtgt atctcctttg agcttctggg ccttagcacc ttcgatttcc tcaaagacaa caactacctg ccctacccca tccaccaagt gcgccacatg gccttccagc tgtgccaggc tgtcaagttc ctccatgata acaagctgac acatacagac ctcaagcctg aaaatattct gtttgtgaat tcagactatg agctcaccta caacctagag aagaagcgag atgagcgcag tgtgaagagc acagctgtgc gggtggtaga ctttggcagt gccacctttg accatgagca ccatagcacc attgtctcca ctcgccatta ccgagcacca gaagtcatcc ttgagttggg ctggtcacag ccttgtgatg tgtggagtat aggctgcatc atctttgaat actatgtggg attcaccctc ttccagaccc atgacaacag agagcatcta gccatgatgg aaaggatctt gggtcctatc ccttcccgga tgatccgaaa gacaagaaag cagaaatatt tttaccgggg tcgcctggat tgggatgaga acacatcagc tgggcgctat gttcgtgaga actgcaaacc gctgcggcgg tatctgacct cagaggcaga ggaacaccac cagctcttcg atctgattga aagcatgcta gagtatgaac cagctaagcg gctgaccttg ggtgaagccc ttcagcatcc tttcttcgcc cgccttcggg ctgagccgcc caacaagttg tgggactcca gtcgggatat cagtcggtga
Molecular Weight	59,962 Da
OMIM	602989
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 CLK2 cdna clone	MBS1274704 is a cDNA clone targeting CLK2.
Other Notes	Small volumes of CLK2 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 CLK2. It may not necessarily be applicable to this product.

NCBI GI #	31566382
NCBI GeneID	1196
NCBI Accession #	BC053603
UniProt Secondary Accession #	Q96CQ0; B1AVS9; B5MBX6
UniProt Related Accession #	P49760
NCBI Official Full Name	Homo sapiens CDC-like kinase 2, mRNA
NCBI Official Synonym Full Names	CDC like kinase 2
NCBI Official Symbol	CLK2

UniProt Protein Name	Dual specificity protein kinase CLK2
UniProt Synonym Protein Names	CDC-like kinase 2
Protein Family	Dual specificity protein kinase
UniProt Gene Name	CLK2
UniProt Entry Name	CLK2_HUMAN
NCBI Protein Information	dual specificity protein kinase CLK2
NCBI Summary for CLK2	This gene encodes a dual specificity protein kinase that phosphorylates serine/threonine and tyrosine-containing substrates. Activity of this protein regulates serine- and arginine-rich (SR) proteins of the spliceosomal complex, thereby influencing alternative transcript splicing. Chromosomal translocations have been characterized between this locus and the PAFAH1B3 (platelet-activating factor acetylhydrolase 1b, catalytic subunit 3 (29kDa)) gene on chromosome 19, resulting in the production of a fusion protein. Note that this gene is distinct from the TELO2 gene (GeneID:9894), which shares the CLK2 alias, but encodes a protein that is involved in telomere length regulation. There is a pseudogene for this gene on chromosome 7. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jun 2014]
UniProt Comments for CLK2	CLK2: Dual specificity kinase acting on both serine/threonine and tyrosine-containing substrates. Phosphorylates serine- and arginine-rich (SR) proteins of the spliceosomal complex. May be a constituent of a network of regulatory mechanisms that enable SR proteins to control RNA splicing and can cause redistribution of SR proteins from speckles to a diffuse nucleoplasmic distribution. Acts as a suppressor of hepatic gluconeogenesis and glucose output by repressing PPARGC1A transcriptional activity on gluconeogenic genes via its phosphorylation. Phosphorylates PPP2R5B thereby stimulating the assembly of PP2A phosphatase with the PPP2R5B-AKT1 complex leading to dephosphorylation of AKT1. Phosphorylates: PTPN1, SRSF1 and SRSF3. Regulates the alternative splicing of tissue factor (F3) pre-mRNA in endothelial cells. Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. Lammer subfamily. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Kinase, protein; EC 2.7.12.1; Protein kinase, CMGC; Protein kinase, dual-specificity (non-receptor); CMGC group; CLK family Chromosomal Location of Human Ortholog: 1q21 Cellular Component: nucleoplasm; nucleus Molecular Function: protein binding; protein serine/threonine kinase activity Biological Process: negative regulation of gluconeogenesis; protein amino acid autophosphorylation; protein amino acid phosphorylation; regulation of RNA splicing; response to ionizing radiation
Research Articles on CLK2	**1.** Loss of CLK2 in luminal breast cancer cells leads to the upregulation of epithelial-to-mesenchymal transition (EMT)-related genes and a switch to mesenchymal splice variants of several genes.
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