CDK7 Peptide - N-Terminal Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	CDK7, Blocking Peptide
Full Product Name	CDK7 Peptide - N-terminal region
Product Gene Name	CDK7 blocking peptide
Product Synonym Gene Name	CAK1; CDKN7; HCAK; MO15; STK1; p39MO15
Sequence	Synthetic peptide located within the following region: VKSRAKRYEK LDFLGEGQFA TVYKARDKNT NQIVAIKKIK LGHRSEAKDG
Species Reactivity	Human
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	CDK7 peptide (MBS3225444) is used for blocking the activity of CDK7 antibody (MBS3200391)
Molecular Weight	39kDa
OMIM	601955
Product Categories/Family for CDK7 blocking peptide	Peptide
Applications Tested/Suitable for CDK7 blocking peptide	Western Blot (WB)
Related Product Information for CDK7 blocking peptide	This is a synthetic peptide designed for use in combination with anti-CDK7 Antibody, made Target Description: CDK7 is a member of the cyclin-dependent protein kinase (CDK) family. CDK family members are highly similar to the gene products of Saccharomyces cerevisiae cdc28, and Schizosaccharomyces pombe cdc2, and are known to be important regulators of cell cycle progression. This protein forms a trimeric complex with cyclin H and MAT1, which functions as a Cdk-activating kinase (CAK). It is an essential component of the transcription factor TFIIH, that is involved in transcription initiation and DNA repair. This protein is thought to serve as a direct link between the regulation of transcription and the cell cycle.
Other Notes	Small volumes of CDK7 blocking peptide 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.
Searchable Terms for CDK7 purchase	MBS3225444 is a blocking peptide targeting CDK7. Also known as CDK7 Peptide - N-terminal region. Reactive in Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDK7. It may not necessarily be applicable to this product.

NCBI GI #	4502743
NCBI GeneID	1022
NCBI Accession #	NP_001790
UniProt Primary Accession #	P50613
UniProt Related Accession #	P50613

GenBank Nucleotide #	NM_001799
NCBI Official Synonym Full Names	cyclin dependent kinase 7
NCBI Official Symbol	CDK7
NCBI Official Synonym Symbols	CAK; CAK1; HCAK; MO15; STK1; CDKN7; p39MO15
UniProt Protein Name	Cyclin-dependent kinase 7
UniProt Synonym Protein Names	39 kDa protein kinase; p39 Mo15; CDK-activating kinase 1; Cell division protein kinase 7; Serine/threonine-protein kinase 1; TFIIH basal transcription factor complex kinase subunit
Protein Family	Cyclin-dependent kinase
UniProt Gene Name	CDK7
UniProt Synonym Gene Names	CAK; CAK1; CDKN7; MO15; STK1; p39 Mo15
UniProt Entry Name	CDK7_HUMAN
NCBI Protein Information	cyclin-dependent kinase 7
NCBI Summary for CDK7	The protein encoded by this gene is a member of the cyclin-dependent protein kinase (CDK) family. CDK family members are highly similar to the gene products of Saccharomyces cerevisiae cdc28, and Schizosaccharomyces pombe cdc2, and are known to be important regulators of cell cycle progression. This protein forms a trimeric complex with cyclin H and MAT1, which functions as a Cdk-activating kinase (CAK). It is an essential component of the transcription factor TFIIH, that is involved in transcription initiation and DNA repair. This protein is thought to serve as a direct link between the regulation of transcription and the cell cycle. [provided by RefSeq, Jul 2008]
UniProt Comments for CDK7	CDK7: a protein kinase of the CDK family. Forms a trimeric complex with cyclin H and MAT1, which functions as a Cdk-activating kinase (CAK). Activates the cyclin-associated kinases CDK1, -2, -4 and -6. An essential component of the transcription factor TFIIH, that is involved in transcription initiation and DNA repair. Serves as a direct link between the regulation of transcription and the cell cycle. Phosphorylates and activates RNA polymerase II, allowing its escape from the promoter and elongation of the transcripts. Involved in cell cycle control and in RNA transcription by RNA polymerase II. Its expression and activity are constant throughout the cell cycle. Protein type: Cell cycle regulation; Nuclear receptor co-regulator; Kinase, protein; Protein kinase, Ser/Thr (non-receptor); EC 2.7.11.22; Protein kinase, CMGC; EC 2.7.11.23; CMGC group; CDK family; CDK7 subfamily; CDK/CDK7 subfamily Chromosomal Location of Human Ortholog: 5q12.1 Cellular Component: nucleoplasm; mitochondrion; holo TFIIH complex; perinuclear region of cytoplasm; cytoplasm; nucleus Molecular Function: protein C-terminus binding; RNA polymerase subunit kinase activity; DNA-dependent ATPase activity; protein binding; androgen receptor binding; cyclin-dependent protein kinase activity; transcription coactivator activity; ATP binding; protein kinase activity Biological Process: transcription from RNA polymerase II promoter; viral reproduction; positive regulation of viral transcription; positive regulation of transcription, DNA-dependent; protein amino acid phosphorylation; regulation of gene expression, epigenetic; mRNA capping; negative regulation of gene expression, epigenetic; transcription-coupled nucleotide-excision repair; nucleotide-excision repair, DNA damage removal; G2/M transition of mitotic cell cycle; cell cycle arrest; transcription initiation from RNA polymerase II promoter; transcription from RNA polymerase I promoter; RNA elongation from RNA polymerase I promoter; DNA repair; termination of RNA polymerase I transcription; cell proliferation; nucleotide-excision repair; cell division; RNA elongation from RNA polymerase II promoter; androgen receptor signaling pathway; gene expression; positive regulation of transcription from RNA polymerase II promoter; mitotic cell cycle; regulation of cyclin-dependent protein kinase activity; transcription initiation from RNA polymerase I promoter; G1/S transition of mitotic cell cycle
Research Articles on CDK7	**1.** Our findings indicate that aberrant CDK7 overexpression associates with T-stage and reduced survival in oral squamous cell carcinoma.

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