R Cdk4 Blocking Peptide (C-Term) Blocking Peptide

PRODUCT OVERVIEW

Product Name	R Cdk4, Blocking Peptide
Full Product Name	R Cdk4 Blocking Peptide (C-term)
Product Gene Name	Cdk4 blocking peptide
Product Synonym Names	Cyclin-dependent kinase 4; Cell division protein kinase 4; PSK-J3; Cdk4
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 1 mg/ml.
Specificity	The synthetic peptide sequence is selected from aa 292-303 of Rat Cdk4
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	R Cdk4 peptide (MBS9229153) is used for blocking the activity of R Cdk4 antibody (MBS9210028)
Molecular Weight	33,799 Da
Cellular Location	Cytoplasm. Nucleus. Membrane. Note: Cytoplasmic when non- complexed. Forms a cyclin D-CDK4 complex in the cytoplasm as cells progress through G(1) phase. The complex accumulates on the nuclear membrane and enters the nucleus on transition from G(1) to S phase. Also present in nucleoli and heterochromatin lumps Colocalizes with RB1 after release into the nucleus (By similarity).
Tissue Location	Expressed in fetal and adult lung. Also expressed in brain, heart, liver, skeletal muscle and testes
Related Product Information for Cdk4 blocking peptide	Ser/Thr-kinase component of cyclin D-CDK4 (DC) complexes that phosphorylate and inhibit members of the retinoblastoma (RB) protein family including RB1 and regulate the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complexes and the subsequent transcription of E2F target genes which are responsible for the progression through the G(1) phase. Hypophosphorylates RB1 in early G(1) phase. Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals. Also phosphorylates SMAD3 in a cell-cycle-dependent manner and represses its transcriptional activity. Component of the ternary complex, cyclin D/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex (By similarity).
Other Notes	Small volumes of Cdk4 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 Cdk4 purchase	MBS9229153 is a blocking peptide targeting Cdk4. Also known as R Cdk4 Blocking Peptide (C-term).

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Cdk4. It may not necessarily be applicable to this product.

NCBI GI #	543972
NCBI GeneID	94201
NCBI Accession #	P35426.1
UniProt Primary Accession #	P35426
UniProt Related Accession #	P35426
NCBI Official Full Name	Cyclin-dependent kinase 4
NCBI Official Synonym Full Names	cyclin-dependent kinase 4

NCBI Official Symbol	Cdk4
UniProt Protein Name	Cyclin-dependent kinase 4
UniProt Synonym Protein Names	Cell division protein kinase 4; PSK-J3
Protein Family	Cyclin-dependent kinase
UniProt Gene Name	Cdk4
UniProt Entry Name	CDK4_RAT
NCBI Protein Information	cyclin-dependent kinase 4
NCBI Summary for Cdk4	positive regulator of the cell cycle; plays a role in cell cycle progression [RGD, Feb 2006]
UniProt Comments for Cdk4	CDK4: a protein kinase of the CDK family that is important for cell cycle G1 phase progression. Its activity is restricted to the G1-S phase. Controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). Phosphorylates the retinoblastoma gene product (Rb). Point mutations found in somatic and familial melanoma. Amplified in sarcomas, glioma and lymphoma. Amplified, methylated or deleted in head and neck squamous cell carcinoma. Overexpression drives epithelial tumors in mice. Disruption makes mice resistant to cancer. Inhibitor: PD332991. Protein type: Protein kinase, Ser/Thr (non-receptor); Kinase, protein; Cell cycle regulation; EC 2.7.11.22; Protein kinase, CMGC; CMGC group; CDK family; CDK4 subfamily; CDK/CDK4 subfamily Cellular Component: chromatin; cyclin-dependent protein kinase holoenzyme complex; cytosol; nuclear membrane; nucleolus; nucleus; perinuclear region of cytoplasm; tight junction; transcription factor complex Molecular Function: cyclin binding; cyclin-dependent protein kinase activity; kinase activity; protein complex binding; protein kinase activity Biological Process: circadian rhythm; G1/S transition of mitotic cell cycle; lens development in camera-type eye; organ regeneration; positive regulation of apoptosis; positive regulation of cell proliferation; positive regulation of cell size; positive regulation of fibroblast proliferation; positive regulation of translation; protein amino acid phosphorylation; regulation of cell cycle; regulation of cell proliferation; regulation of gene expression; response to drug; response to hyperoxia; response to lead ion; response to organic substance; response to testosterone stimulus; response to toxin; signal transduction
Research Articles on Cdk4	**1.** These results establish CDK4 as a GATA4 partner in cardiogenesis
Precautions	All of MyBioSource's Products are for scientific laboratory research purposes and are not for diagnostic, therapeutics, prophylactic or in vivo use. Through your purchase, you expressly represent and warrant to MyBioSource that you will properly test and use any Products purchased from MyBioSource in accordance with industry standards. MyBioSource and its authorized distributors reserve the right to refuse to process any order where we reasonably believe that the intended use will fall outside of our acceptable guidelines.
Disclaimer	While every efforts were made to ensure the accuracy of the information provided in this datasheet, MyBioSource will not be liable for any omissions or errors contained herein. MyBioSource reserves the right to make changes to this datasheet at any time without prior notice. It is the responsibility of the customer to report product performance issues to MyBioSource within 30 days of receipt of the product. Please visit our Terms & Conditions page for more information.
Product Note	Select online data sheet information is drawn from bioinformatics databases, occasionally resulting in ambiguous or non-relevant product information. It is the responsibility of the customer to review, verify, and evaluate the information to make sure it matches their requirements before purchasing the kit. Our ELISA Kit assays are dynamic research tools and sometimes they may be updated and improved. If the format of this assay is important to you then please request the current manual or contact our technical support team with a presales inquiry before placing an order. We will confirm the current details of the assay. We cannot guarantee the sample manual posted online is the most current manual, it is intended to serve as an example only. Please refer to the instructions For Use provided with the assay kit for precise details.

For Research Use Only. Not for use in diagnostic or therapeutic procedures.