Cyclin Dependent Kinase 4 (CDK4) ELISA Kit for Human

PRODUCT OVERVIEW

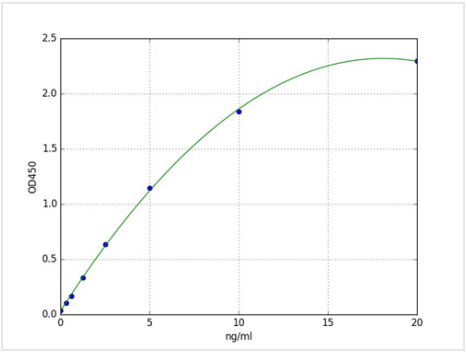
Product Name	Cyclin Dependent Kinase 4 (CDK4), ELISA Kit
Full Product Name	Human Cyclin Dependent Kinase 4 ELISA Kit
Product Gene Name	CDK4 elisa kit
Product Synonym Names	CDK4/CMM3/PSK-J3/Cell division protein kinase 4/CMM3/cyclin-dependent kinase 4/melanoma cutaneous malignant; 3/MGC14458/PSK-J3cell division kinase 4
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.313-20ng/ml
Sensitivity	0.188ng/ml
Preparation and Storage	Store entire kit at 2-8C for short-term. For longer-term, please store the microplate & standard at -20C, while the remaining reagents can be stored at 2-8C
Molecular Weight	20,725 Da
OMIM	123829
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CDK4 elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. anti-Human CDK4 antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human CDK4 antibody was used as detection antibodies. The standards, test samples and biotin conjugated detection antibody were added to the wells subsequently, and wash with wash buffer. HRP-Streptavidin was added and unbound conjugates were washed away with wash buffer. TMB substrates were used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the Human CDK4 amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human CDK4 can be calculated.
Other Notes	Small volumes of CDK4 elisa kit 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	MBS763071 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cyclin Dependent Kinase 4 (CDK4) ELISA Kit target analytes in biological samples. The concentration gradients of the kit standards or positive controls render a theoretical kit detection range in biological research samples containing CDK4. The ELISA analytical biochemical technique of the MBS763071 kit is based on CDK4 antibody-CDK4 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CDK4 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CDK4. Appropriate sample types may include undiluted body fluids and/or tissue homogenates, secretions. Quality control assays assessing reproducibility identified the intra-assay CV (%) and inter-assay CV(%).

Typical Data & Standard Curve

Results of a typical standard run of a Human CDK4 ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment. (N/A=not applicable)

X	ng/ml	0	0.313	0.625	1.25	2.5	5	10	20
Y	OD450	0.148	0.188	0.263	0.297	0.566	0.978	1.405	2.085

Typical Testing Data of CDK4 elisa kit



Typical Standard Curve of CDK4 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CDK4. It may not necessarily be applicable to this product.

NCBI GI #	4502735
NCBI GeneID	1019
NCBI Accession #	NP_000066.1
UniProt Secondary Accession #	O00576; Q6FG61; B2R9A0; B4DNF9
UniProt Related Accession #	P11802
GenBank Nucleotide #	NM_000075.3
NCBI Official Full Name	cyclin-dependent kinase 4
NCBI Official Synonym Full Names	cyclin-dependent kinase 4
NCBI Official Symbol	CDK4
NCBI Official Synonym Symbols	CMM3; PSK-J3
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_HUMAN
NCBI Protein Information	cyclin-dependent kinase 4
NCBI Summary for CDK4	The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is highly similar to the gene products of S. cerevisiae cdc28 and S. pombe cdc2. It is a catalytic subunit of the protein kinase complex that is important for cell cycle G1 phase progression. The activity of this kinase is restricted to the G1-S phase, which is controlled by the regulatory subunits D-type cyclins and CDK inhibitor p16(INK4a). This kinase was shown to be responsible for the phosphorylation of retinoblastoma gene product (Rb). Mutations in this gene as well as in its related proteins including D-type cyclins, p16(INK4a) and Rb were all found to be associated with tumorigenesis of a variety of cancers. Multiple polyadenylation sites of this gene have been reported. [provided by RefSeq, Jul 2008]

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: EC 2.7.11.22; Kinase, protein; Protein kinase, CMGC; Protein kinase, Ser/Thr (non-receptor); Cell cycle regulation; CMGC group; CDK family; CDK4 subfamily; CDK/CDK4 subfamily Chromosomal Location of Human Ortholog: 12q14 Cellular Component: chromatin; cyclin-dependent protein kinase holoenzyme complex; cytosol; nuclear membrane; nucleolus; nucleoplasm; nucleus; perinuclear region of cytoplasm; tight junction; transcription factor complex Molecular Function: ATP binding; cyclin binding; cyclin-dependent protein kinase activity; cyclin-dependent protein kinase regulator activity; protein binding; protein complex binding Biological Process: cell division; circadian rhythm; establishment and/or maintenance of chromatin architecture; G1/S transition of mitotic cell cycle; lens development in camera-type eye; mitotic cell cycle; 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 gene expression; regulation of protein kinase activity; response to drug; response to hyperoxia; response to lead ion; response to testosterone stimulus; response to toxin; signal transduction Disease: Melanoma, Cutaneous Malignant, Susceptibility To, 3
Research Articles on CDK4	**1.** shRNA-mediated knockdown or chemical inhibition of CDK4 prevented the increase in cell size associated with the senescent phenotype by allowing the cells to arrest in G1 rather than G2/M.
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