Cyclin-D2 (CCND2) ELISA Kit for Human

PRODUCT OVERVIEW

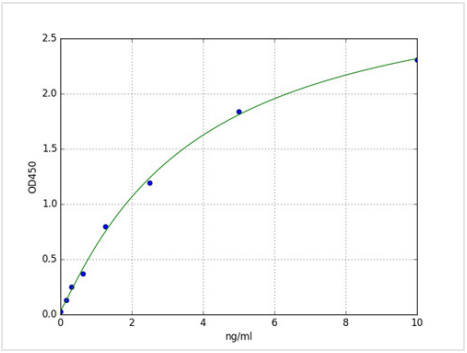
Product Name	Cyclin-D2 (CCND2), ELISA Kit
Full Product Name	Human Cyclin-D2 ELISA Kit
Product Gene Name	CCND2 elisa kit
Product Synonym Names	CCND2/G1,S-specific cyclin-D2
Species Reactivity	Human
Assay Type	Sandwich ELISA, Double Antibody
Samples	Serum, Plasma, Cell Culture Supernatant, cell or tissue lysate, Other liquid samples
Detection Range	0.156-10ng/ml
Sensitivity	0.094ng/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	24,461 Da
OMIM	123833
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Related Product Information for CCND2 elisa kit	Principle of the Assay||This kit was based on sandwich enzyme-linked immune-sorbent assay technology. anti-Human CCND2 antibody was pre-coated onto 96-well plates. And the biotin conjugated anti-Human CCND2 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 CCND2 amount of sample captured in plate. Read the O.D. absorbance at 450nm in a microplate reader, and then the concentration of Human CCND2 can be calculated.
Other Notes	Small volumes of CCND2 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 CCND2 purchase	MBS765142 is a ready-to-use microwell, strip plate ELISA (enzyme-linked immunosorbent assay) Kit for analyzing the presence of the Cyclin-D2 (CCND2) 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 CCND2. The ELISA analytical biochemical technique of the MBS765142 kit is based on CCND2 antibody-CCND2 antigen interactions (immunosorbency) and an HRP colorimetric detection system to detect CCND2 antigen targets in samples. The ELISA Kit is designed to detect native, not recombinant, CCND2. 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 CCND2 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	0.156	0.313	0.625	1.25	2.5	5	10
Y	OD450	0.106	0.164	0.236	0.265	0.508	0.840	1.656	2.180

Typical Testing Data of CCND2 elisa kit



Typical Standard Curve of CCND2 elisa kit

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CCND2. It may not necessarily be applicable to this product.

NCBI GI #	119609257
NCBI GeneID	894
NCBI Accession #	EAW88851.1
UniProt Secondary Accession #	Q13955; Q5U035; A8K531
UniProt Related Accession #	P30279
NCBI Official Full Name	cyclin D2
NCBI Official Synonym Full Names	cyclin D2
NCBI Official Symbol	CCND2
NCBI Official Synonym Symbols	MPPH3; KIAK0002
UniProt Protein Name	G1/S-specific cyclin-D2
Protein Family	G1/S-specific cyclin
UniProt Gene Name	CCND2
UniProt Entry Name	CCND2_HUMAN
NCBI Protein Information	G1/S-specific cyclin-D2
NCBI Summary for CCND2	The protein encoded by this gene belongs to the highly conserved cyclin family, whose members are characterized by a dramatic periodicity in protein abundance through the cell cycle. Cyclins function as regulators of CDK kinases. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. This cyclin forms a complex with CDK4 or CDK6 and functions as a regulatory subunit of the complex, whose activity is required for cell cycle G1/S transition. This protein has been shown to interact with and be involved in the phosphorylation of tumor suppressor protein Rb. Knockout studies of the homologous gene in mouse suggest the essential roles of this gene in ovarian granulosa and germ cell proliferation. High level expression of this gene was observed in ovarian and testicular tumors. Mutations in this gene are associated with megalencephaly-polymicrogyria-polydactyly-hydrocephalus syndrome 3 (MPPH3). [provided by RefSeq, Sep 2014]

UniProt Comments for CCND2	CCND2: Regulatory component of the cyclin D2-CDK4 (DC) complex that phosphorylates and inhibits members of the retinoblastoma (RB) protein family including RB1 and regulates the cell-cycle during G(1)/S transition. Phosphorylation of RB1 allows dissociation of the transcription factor E2F from the RB/E2F complex 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 substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. Component of the ternary complex, cyclin D2/CDK4/p27Kip1, required for nuclear translocation and activity of the cyclin D-CDK4 complex. Interacts with either CDK4 or CDK6 protein kinase to form a serine/threonine kinase holoenzyme complex. The cyclin subunit imparts substrate specificity to the complex. Component of the ternary complex cyclin D/CDK4/p27Kip1 required for nuclear translocation and modulation of CDK4-mediated kinase activity. Belongs to the cyclin family. Cyclin D subfamily. Protein type: Motility/polarity/chemotaxis; Cell cycle regulation Chromosomal Location of Human Ortholog: 12p13 Cellular Component: chromatin; cyclin-dependent protein kinase holoenzyme complex; cytosol; nuclear membrane; nucleolus; nucleoplasm; nucleus Molecular Function: protein binding; protein kinase binding Biological Process: cell cycle; cell division; positive regulation of cyclin-dependent protein kinase activity; positive regulation of protein amino acid phosphorylation Disease: Megalencephaly-polymicrogyria-polydactyly-hydrocephalus Syndrome 3
Research Articles on CCND2	**1.** the dysregulation of miR-206-CCND2 axis may contribute to the aggressive progression and poor prognosis of human gastric cancer.
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