CCND2 siRNA – G1/S-Specific Cyclin-D2 (Human)

PRODUCT OVERVIEW

Product Name	CCND2, siRNA
Full Product Name	CCND2 siRNA (Human)
Product Gene Name	CCND2 sirna
Product Synonym Names	G1/S-specific cyclin-D2
Host	Synthetic
Species Reactivity	Human
Form/Format	Lyophilized powder
Purity/Purification	> 97%
Specificity	CCND2 siRNA (Human) is a target-specific 19-23 nt siRNA oligo duplexes designed to knock down gene expression.
Preparation and Storage	Shipped at 4 degree C. Store at -20 degree C for one year.
Molecular Weight	24,461 Da
OMIM	123833
3D Structure	ModBase 3D Structure for P30279
Negative Control	siRNA Negative Control (Catalog# MBS8241404) is a non-targeting 21 nt siRNA recommended as a negative control for experiments using targeted siRNA transfection.
Quality Control	Oligonucleotide synthesis is monitored base by base through trityl analysis to ensure appropriate coupling efficiency. The oligo is subsequently purified by affinity-solid phase extraction. The annealed RNA duplex is further analyzed by mass spectrometry to verify the exact composition of the duplex. Each lot is compared to the previous lot by mass spectrometry to ensure maximum lot-to-lot consistency.
Directions for Use	We recommends transfection with 100 nM siRNA 48 to 72 hours prior to cell lysis. Before resuspending, briefly centrifuge the tube to ensure the lyophilized siRNA is at the bottom of the tube. Resuspend the siRNA oligos to an appropriate concentration with DEPC water. For each vial, suitable for 250 transfections in 24 well plate (20 pmol for each well).
Components	We offer pre-designed sets of 3 different target-specific siRNA oligo duplexes of human CCND2 gene. Each vial contains 5 nmol of lyophilized siRNA. The duplexes can be transfected individually or pooled together to achieve knockdown of the target gene, which is most commonly assessed by qPCR or western blot. Our siRNA oligos are also chemically modified (2'-OMe) at no extra charge for increased stability and enhanced knockdown in vitro and in vivo.
Applications Tested/Suitable for CCND2 sirna	RNA Interference (RNAi)
Related Product Information for CCND2 sirna	MBS8240568 is an siRNA targeting CCND2. Also known as CCND2 siRNA (Human). Reactive in Human. Host: Synthetic. siRNA to inhibit CCND2 expression using RNA interference
Other Notes	Small volumes of CCND2 sirna 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 CCND2. It may not necessarily be applicable to this product.

NCBI GI #	4502617
NCBI GeneID	894
NCBI Accession #	NP_001750.1
UniProt Primary Accession #	P30279
UniProt Secondary Accession #	Q13955; Q5U035; A8K531
UniProt Related Accession #	P30279
GenBank Nucleotide #	NM_001759.3
NCBI Official Full Name	G1/S-specific 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: Cell cycle regulation; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 12p13 Cellular Component: nucleoplasm; nuclear membrane; nucleolus; cyclin-dependent protein kinase holoenzyme complex; nucleus; chromatin; cytosol Molecular Function: protein binding; protein kinase binding Biological Process: positive regulation of cyclin-dependent protein kinase activity; cell division; positive regulation of protein amino acid phosphorylation; cell cycle Disease: Megalencephaly-polymicrogyria-polydactyly-hydrocephalus Syndrome 3
Research Articles on CCND2	**1.** Study establishes that a low-frequency allele in CCND2 halves the risk of type 2 diabetes primarily through enhanced insulin secretion.
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.

MyBioSource | Tel: +1.858.633.0165 | Fax: +1.858.633.0166 | mybiosource.com/contact-us
Online datasheet: https://www.mybiosource.com/human-sirna/ccnd2/8240568