

# Recombinant Human Cyclin-D2/CCND2 Protein (His Tag)



Catalog Number:PDEH100320

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

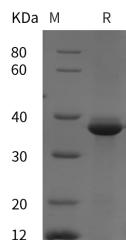
## Description

<b>Synonyms</b>	G1/S-specific cyclin-D2;CCND2
<b>Species</b>	Human
<b>Expression Host</b>	E.coli
<b>Sequence</b>	Met 1-Leu289
<b>Accession</b>	P30279
<b>Calculated Molecular Weight</b>	31.7 kDa
<b>Observed molecular weight</b>	38 kDa
<b>Tag</b>	N-His & C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

CCND2,also known as G1/S-specific cyclin-D2,is a member of the highly conserved cyclin family. Different cyclins exhibit distinct expression and degradation patterns which contribute to the temporal coordination of each mitotic event. Cyclins function as regulators of CDK kinases. This cyclin forms a complex with and functions as a regulatory subunit of CDK4 or CDK6, whose activity is required for cell cycle G1/S transition. CCND2 is involved in a number of fundamental biological processes such as phosphorylating and inhibiting members of the retinoblastoma (RB) protein family including RB1 and regulating the cell-cycle during G1/S transition. It is also substrate for SMAD3, phosphorylating SMAD3 in a cell-cycle-dependent manner and repressing its transcriptional activity. 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

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responsible for the progression through the G1 phase. Cyclin D-CDK4 complexes are major integrators of various mitogenenic and antimitogenic signals. Component of the ternary complex, cyclin D2/CDK4/CDKN1B, required for nuclear translocation and activity of the cyclin D-CDK4 complex.

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