Data Sheet (Cat.No.TMPJ-00936)

TargetMol

CCND2 Protein, Human, Recombinant (His)

General Information

Synonyms:	G1/S-specific cyclin-D2;CCND2
Protein Construction:	Met1-Leu289
Species:	Human
Expression Host:	E. coli
Accession:	P30279
Molecular Weight:	35 KDa (reducing condition)
AA Sequence:	Met1-Leu289

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	Greater than 90% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/μg (1 EU/μg) as determined by LAL test.
Formulation:	Supplied as a 0.2 μm filtered solution of 20 mM Tris-HCl, 150 mM NaCl, 5 mM DTT, pH 7.5.

Preparation and Storage

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein 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 responsible for the progression through the G1 phase. Cyclin D-CDK4 complexes are major integrators of various mitogenic 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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