# Recombinant CCND2 protein (His tag)

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| **Catalog Number** | 546904 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | P30279 |
| **Molecular Weight** | Predictes a molecular mass of 34.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 37 kDa band. |

## Product Information

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| **Sequence Region** | 1-289 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >85%, by SDS-PAGE with Coomassie Brilliant Blue staining. |
| **Endotoxin** | Not tested. |
| **Activity** | Not tested. |
| **Stability** | Samples are stable for up to twelve months from date of receipt at -70℃ |
| **Protein Construction** | DNA encoding 1-289 aa (P30279) were fused with 6His tag. |

## Storage & Handling

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| **Reconstitution** | Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution. |
| **Storage** | Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. |
| **Shipping** | In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human G1/S-specific cyclin-D2 (CCND2) fragment (amino acids 1-289) is a high-purity protein designed for studying cell cycle regulation. This fragment fully encompasses the Cyclin N-terminal domain, making it an ideal tool for investigating G1/S transition mechanisms and cyclin-CDK complex interactions in research applications.<br>G1/S-specific cyclin-D2 is a regulatory component of the cyclin D2-CDK4 complex that plays a crucial role in cell cycle progression during the G1/S transition. The complex phosphorylates and inhibits retinoblastoma (RB) protein family members, including RB1, allowing dissociation of transcription factor E2F from RB/E2F complexes and subsequent transcription of genes essential for G1 phase progression. Cyclin D-CDK4 complexes serve as major integrators of mitogenic and antimitogenic signals and accumulate at the nuclear membrane before translocation into the nucleus. The full-length protein localizes to the nucleus, cytoplasm, and nuclear membrane, highlighting its dynamic role in cell cycle regulation. |