

CCND1 Protein, Human (His)

Cat. No.:	HY-P72119
Synonyms:	AI327039; B cell leukemia 1; B-cell lymphoma 1 protein; BCL 1; BCL-1; BCL-1 oncogene; BCL1; BCL1 oncogene; ccnd1; CCND1/FSTL3 fusion gene; CCND1/FSTL3 fusion gene; included; CCND1/IGHG1 fusion gene; CCND1/IGLC1 fusion gene; CCND1_HUMAN; cD1; Cyl 1; D11S287E; G1/S specific cyclin D1; G1/S-specific cyclin-D1; PRAD1; PRAD1 oncogene; U21B31
Species:	Human
Source:	E. coli
Accession:	P24385 (M1-I295)
Gene ID:	595
Molecular Weight:	Approximately 37.7 kDa

PROPERTIES

AA Sequence	<pre> MEHQLLCCEV ETIRRAYPDA NLLNDRVLR MLKAEETCAP SVSYFKCVQK EVLP SMRKIV ATWML EVCEE QKCEEEVFPL AMNYLDRFLS LEPVKK SRLQ LLGATCMFVA SKMKETIPLT AEKLCIYTDN SIRPEELLQM ELLLVNKLKW NLAAMTPHDF IEHF LSKMPE A EENKQ IIRK HAQTFVALCA TDVKFISNPP SMVAAGSVVA AVQGLNLRSP NNFLSYRLT RFLSRVIKCD PDC LRACQEQ IEALLESSLR QAQQNM DPKA AEEEEEEEEEE VDLACTPTDV RDVDI </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm sterile filtered 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	The CCND1 protein functions as a regulatory component of the cyclin D1-CDK4 (DC) complex, orchestrating phosphorylation and inhibition of retinoblastoma (RB) family members, including RB1, to modulate cell-cycle progression during G(1)/S transition. This phosphorylation event prompts the dissociation of the transcription factor E2F from the RB/E2F complex, facilitating the transcription of E2F target genes essential for G(1) phase progression. CCND1 also exhibits
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hypophosphorylation activity on RB1 in early G(1) phase. Serving as a major integrator of mitogenic and antimitogenic signals, cyclin D-CDK4 complexes, including CCND1, play a pivotal role in cell-cycle regulation. Additionally, CCND1 engages in interactions with various proteins, such as SMAD3, forming a ternary complex with CDK4 and CDKN1B, and displaying transcriptional corepressor activity with INSM1. These intricate interactions contribute to the nuanced regulatory functions of CCND1 in cellular processes.

Caution: Product has not been fully validated for medical applications. For research use only.

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