

CDKN1B Protein, Human (His)

Cat. No.:	HY-P70037
Synonyms:	rHuCyclin-dependent kinase inhibitor 1B/CDKN1B, His; Cyclin-Dependent Kinase Inhibitor 1B; Cyclin-Dependent Kinase Inhibitor p27; p27Kip1; CDKN1B; KIP1
Species:	Human
Source:	E. coli
Accession:	P46527 (M1-T198)
Gene ID:	1027
Molecular Weight:	Approximately 30.0 kDa

PROPERTIES

AA Sequence	<pre> MSNVRVSNGS PSLERMDARQ AEHPKPSACR NLFGPVDHEE LTRDLEKHCR DMEEASQRKW NFDFQNHKPL EGKYEWEVE KGSLEPEFYR PPRPPKGACK VPAQESQDVS GSRPAAPLIG APANSEDTLL VDPKTDPSDS QTGLAEQCAG IRKRPATDDS STQNKRANRT EENVSDGSPN AGSVEQTPKK PGLRRRQT </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	<p>The CDKN1B protein serves as a pivotal regulator in cell cycle progression, exerting its influence through multifaceted interactions and activities. Acting as a potent inhibitor, CDKN1B restrains the kinase activity of CDK2 when bound to cyclin A, while exhibiting lesser inhibitory effects on CDK2 associated with SPDYA. This protein is intricately involved in G1 arrest and displays a pronounced inhibitory impact on cyclin E- and cyclin A-CDK2 complexes. Notably, it forms complexes with cyclin type D-CDK4, playing a crucial role in their assembly, stability, and modulation of CCND1-CDK4 complex activation. The phosphorylation state and stoichiometry of CDKN1B determine whether it functions as an inhibitor or activator of cyclin type D-CDK4 complexes. Additionally, CDKN1B engages in diverse interactions, including those with proteins such as CCNE1,</p>
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COPS5, NUP50, 14-3-3, AKT1, LYN, CDK2, SPDYA, cyclin D, CDK4, GRB2, PIM1, SKP1, SKP2, CKS1B, UHMK1, and CDK1, highlighting its versatility in modulating cell cycle dynamics. Notably, its dephosphorylation on Thr-187 by PPM1H contributes to CDKN1B stability.

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

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