



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CDKN1B Protein
Catalog Number: hRP-2706
Manufacturer: LD Biopharma, Inc.

Introduction:

This gene encodes a cyclin-dependent kinase inhibitor, which shares a limited similarity with CDK inhibitor CDKN1A/p21. The encoded protein binds to and prevents the activation of cyclin E-CDK2 or cyclin D-CDK4 complexes, and thus controls the cell cycle progression at G1. The degradation of this protein, which is triggered by its CDK dependent phosphorylation and subsequent ubiquitination by SCF complexes, is required for the cellular transition from quiescence to the proliferative state.

Full-length human CDKN1B cDNA (197 aa) was constructed with codon optimization gene synthesis and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CDKN1B (CDKN4; KIP1; MEN1B; MEN4; P27KIP1)
Accession Number: NP_004055
Species: Human
Size: 40 µg / Vial
Composition: 0.4 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose, DTT and others.
Storage: In liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Ben Sang., et al., *Dual fucntions for OVAAL in initiation of RAF/MEK/ERK prosurvival siganls and evasion of p27-mediated cellular senescence.* PNAS. doi/10.1073/pnas.1805950115, (2018)



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Kim, H., et al., *JNK signaling activity regulates cell-cell adhesions via TM4SF5-mediated p27(Kip1) phosphorylation*. *Cancer Lett.* 314 (2), 198-205 (2012)

Mirchandani, D., et al., *Loss of p27KIP1 expression in fully-staged node-negative breast cancer: association with lack of hormone receptors in T1a/b, but not T1c infiltrative ductal carcinoma*. *Anticancer Res.* 31 (12), 4401-4405 (2011)

Hennenlotter, J., et al., *Differential Akt signalling in non-seminomatous testicular germ cell tumors*. *Anticancer Res.* 31 (11), 3783-3788 (2011)

Applications

1. May be used for in vitro CDKN1B mediated signaling pathway regulation for cell aging process study using intracellular delivery of recombinant human AFPn-CDKN1B protein with protein delivery reagent such as ProFectin.
2. May be used for CDKN1B protein-protein interaction assay.
3. May be used as specific substrate protein for CDKN1B specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human CDKN1B antigen for specific antibody production.

Quality Control:

1. Purity: > 90 % by SDS-PAGE.

Recombinant Human AFPn-CDKN1B Protein Sequence (46.4 kD)

MTLHRNEYGIASILD SYQCTAEISLADLATIFFAQFVQEATYKEVSKMVKDALTAIEKPTGDEQ
SSGCLENQLPAFLEELCHEKEILEKYGHSDCCSQSEEGRHNCFLAHKKPTPASIPLFQVPEPVT
SCEAYEEDRETFMNFYIYIARRHPFLYAPTILLWAARYDKIIPSCCKAENAVECFQTKAATVT
KELRESSGGSHHHHHGSENLYFQSNVRVSNGPSLERMDARQAEHPKPSACRNLFPGVDH
EELTRDLEKHCRCMEEASQRKWNFDFQNHKPLEGKYEWQEVKGS LPEFYRPPRPPKG
ACKVPAQESQDVSGSRPAAPLIGAPANSEDTLHVDPKTDPSDSQTGLAEQCAGIRKRPA
TDDSSTQNKRANRTEENVSDGSPNAGSVEQTPKKPGLRRRQT