



LD Biopharma, Inc.
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human CDKN2C Protein
Catalog Number: hRP-0392
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by this human CDKN2C (Cyclin-dependent kinase 4 inhibitor C) is a member of the INK4 family of cyclin-dependent kinase inhibitors. Human CDKN2C has been shown to interact with CDK4 or CDK6, and prevent the activation of the CDK kinases, thus function as a cell growth regulator that controls cell cycle G1 progression. Ectopic expression of this gene was shown to suppress the growth of human cells in a manner that appears to correlate with the presence of a wild-type RB1 function. Studies in the knockout mice suggested the roles of this gene in regulating spermatogenesis, as well as in suppressing tumorigenesis.

Full-length human CDKN2C gene was constructed with N-terminal 15aa T7 tag and expressed in E.coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Incubating this protein with PolyPlus or LD Biopharma’s novel polymer reagent will efficiently deliver this protein intracellularly for its functional study in vitro.

Gene Symbol: CDKN2C (INK4C; p18)
Accession Number: NP_001253
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 30 days.



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Key References

Kulkarni, M.V. et al. *N-Myc is a downstream target of RET signaling and is required for transcriptional regulation of p18(Ink4c) by the transforming mutant RET(C634R)*. Mol Oncol 5 (1), 24-35 (2011)

AUTHORS Guan, K.L., et al. *Growth suppression by p18, a p16INK4/MTS1- and p14INK4B/MTS2-related CDK6 inhibitor, correlates with wild-type pRb function*. Genes Dev. 8 (24), 2939-2952 (1994)

Applications

1. Protein transduction for studying cell cycle regulation and tumorigenesis in vitro.
2. As active protein, may be used for studying pRB/p18 interaction pathway in vitro.
3. As immunogen for specific antibody production.
4. As potential biomarker protein for cancer diagnosis in vitro.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Functional Test: Not tested yet.

Recombinant Protein Sequence

MASMTGGQENGRGEFAEPWGNELASAAARGDLEQLTSLQNNVNVNAQNGFGR^{TALQVMKLG}NP
E^{IARRLLLRGANPDLKDR}TGF^{AVIHDAARAGFLDTLQTLLEFQADVNI}EDNEGNLPLHLAAKEG
HLRVVEFLVKHTASNVGHRNHKGDTACDLARLYGRNEVVS^{LMQANGAGGATNLQ}