



LD Biopharma, Inc.
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Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human POP2 Protein
Catalog Number: hTF-1571
Manufacturer: LD Biopharma, Inc.

Introduction

Eukaryotic DNA replication is tightly coordinated with the disassembly of nucleosomes in front of advancing replication forks, histone synthesis and transport, and rapid packaging of the nascent strands into nucleosomes. Several conserved proteins have been implicated in the assembly of nucleosomes during DNA replication. The major factor that orchestrates replication-coupled nucleosome assembly is the heterotrimeric POP2. Human POP2 is an essential histone H3-H4 chaperone composed of p150, p60, and p48 subunits. POP2 has 3'-5' poly(A) exoribonuclease activity for synthetic poly(A) RNA substrate in CCR-NOT complex, which is linked to various cellular processes including bulk mRNA degradation, miRNA-mediated repression, translational repression during translational initiation and general transcription regulation.

Full-length human POP2 (291aa, derived from BC017366) gene was constructed with 29 aa N-terminal T7 / His / TEV cleavage site Tag and expressed in E.coli as inclusion bodies. It was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: POP2 (CAF1; CALIF; CNOT8)
Accession Number: NP_004770.4
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, Sucrose and DTT.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

Key References



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Kadyrova LY, et al., *Human CAF-1-dependent nucleosome assembly in a defined system.* Cell Cycle 12 (20), 3286-3297 (2013)

Loh B, et al., *The SMG5-SMG7 heterodimer directly recruits the CCR4-NOT deadenylase complex to mRNAs containing nonsense codons via interaction with POP2.* Genes Dev. 27 (19), 2125-2138 (2013)

Petit AP, et al., *The structural basis for the interaction between the CAF1 nuclease and the NOT1 scaffold of the human CCR4-NOT deadenylase complex.* Nucleic Acids Res. 40 (21), 11058-11072 (2012)

Applications

1. May serve as auto-antibodies detection reagent, which will react with sera of some autoimmune-diseases patients.
2. May be used for in vitro POP2 mediated mRNA degradation, and nucleosome assembly pathway study with “ProFectin” reagent based intracellular delivery of this protein.
3. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. May be used for POP2 protein-protein interaction mapping.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFPAALVENSQVICEVWASNLEEMRKIREIVLSYSY
IAMDTEFPGVVVRPIGEFRSSIDYQYQLLR CNVDLLKIIQLGLTFTNEKGEYPSGINTWQFNFK
FNLTEDMYSQDSIDLLANGLQFQKHEEEGIDTLHF AELLMTSGVVLC DNVKWLSFHSGYDFGY
MVKLLTDSRLPEEEHEFFHILNLFPSIYDVKYL MKSCKNLKGG LQEVADQLDLQRIGRQH QAG
SDSLLTGMAFFRMKELFFEDSIDDAKYCGRLYGLGTGVAQKQNE DVDSAQEKMSILAI INMQQ