



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human NET1 Protein
Catalog Number: hRP-2241
Manufacturer: LD Biopharma, Inc.

Introduction

Human neuroepithelial cell-transforming gene 1 (Net1) gene is part of the family of Rho guanine nucleotide exchange factors. Members of this family activate Rho proteins by catalyzing the exchange of GDP for GTP. The protein encoded by this gene interacts with RhoA within the cell nucleus and may play a role in repairing DNA damage after ionizing radiation. Alternative splicing results in multiple transcript variants that encode different protein isoforms. Recent data indicated that Net1 plays an important role in both TGF β / Nodal & Wnt / b-Catenin cell signaling pathway regulation.

Full-length human Net1 cDNA (541aa derived from BC009720, Isoform-II) was constructed with codon optimization and expressed with a human alpha Fetal Protein N-terminal (AFPn) -His-TEV cleavage site Tag (217aa) fusion at its N-terminal. This protein was expressed 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: NET1 (ARHGEF8 ; NET1A)
Accession Number: NP_005854
Species: Human
Size: 10 μ g / Vial
Composition: 0.1 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 30 days.

Key References



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Shi Wei, et al., *A GEF activity-independent function for nuclear Net1 in Nodal/Smad2 signal transduction and mesendoderm formation*. Journal of Cell Science. doi: 10.1242/jcs.204917 (2017)

Schaffer BE, et al., *Identification of AMPK Phosphorylation Sites Reveals a Network of Proteins Involved in Cell Invasion and Facilitates Large-Scale Substrate Prediction*. Cell Metab. 22 (5), 907-921 (2015)

Fang L, et al., *Neuroepithelial transforming gene 1 functions as a potential prognostic marker for patients with non-small cell lung cancer*. Mol Med Rep 12 (5), 7439-7446 (2015)

Applications

1. May be used for in vitro NET1 mediated TGFb/ Nodal & Wnt / b-catenin cell signaling pathway regulations study with intracellularly delivery this protein with ProFectin reagents.
2. May be used for protein-protein interaction assay.
3. Potential anti-cancer therapeutic target protein and diagnostic biomarker protein, such as for lung cancer early detection.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFVAHDETGGLLPIKRTIRVLDVNNQSFREQEEPSNK
RVRPLARVTSLANLISPVRNGAVRRFGQTIQSFTLRGDHRSPASAQKFSSRSTVPTPAKRRSSA
LWSEMLDITMKESLTTREIRRQEAIYEMSRGEQDLIEDLKLARKAYHDPMLKLSIMSEEELTHI
FGDLDSYIPLHEDLLTRIGEATKPDGTVEQIGHILVSWLPRLNAYRGYCSNQLAAKALLDQKKQ
DPRVQDFLQRCLESPFSRKLDLWSFLDIPRSRLVKYPLLLKEILKHTPKHEHPDVQLLEDAIILI
QGVLS DINLKKGESECCQYYIDKLEYLDEKQRDPRIEASKVLLCHGELRSKSGHKLYIFLFDIL
VLTRPVTRNERHSYQVYRQPIPVQELVLEDLQGDVVMGGSFRGAFSSEKAKNIFRIRFHDP
PAQSHTLQANDVFHKQWFNCIRAAIAPFQSAGSPPELQGLPELHEECEGNHPSARKLTAQRRA
STVSSVTQVEVDENAYRCGSGMQMAEDSKSLKTHQTQPGIRRARDKALSGGKRKETLV