LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human RNF2 Protein
Catalog Number: hTF-1078
Manufacturer: LD Biopharma, Inc.

Introduction

Polycomb group (PcG) of proteins form the multiprotein complexes that are important for the transcription repression of various genes involved in development and cell proliferation. The protein encoded by human RNF2 (E3 ubiquitin-protein ligase RING2) gene is one of the PcG proteins. It has been shown to interact with, and suppress the activity of, transcription factor CP2 (TFCP2/CP2). Studies of the mouse counterpart suggested the involvement of this gene in the specification of anterior-posterior axis, as well as in cell proliferation in early development. This protein was also found to interact with huntingtin interacting protein 2 (HIP2), an ubiquitin-conjugating enzyme, and possess ubiquitin ligase activity. Recent data indicated that RNF2 negatively regulates p53 expression, which may plays an important role in various tumor development.

Full-length human RNF2 cDNA (336aa) was constructed with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) 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:	RNF2 (BAP-1; DING; HIPI3; RING1B; RING2)
Accession Number:	NP_009143
Species:	Human
Size:	20 µg / Vial
Composition:	0.20 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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Wen-jing Su, et al., *RNF2/Ring1b negatively regulates p53 expression in selective cancer cell types to promote tumor development*. PNAS. Jan 29; 110 (5): 1720-1725. (2013).

Djeghader,A., et al. *The level of DING proteins is increased in HIV-infected patients: in vitro and in vivo studies*. PLoS ONE 7 (3), E33062 (2012)

Tuckfield,A., et al. *Binding of the RING polycomb proteins to specific target genes in complex with the grainyhead-like family of developmental transcription factors*. Mol. Cell. Biol. 22 (6), 1936-1946 (2002)

Applications

1. May be used for in vitro RNF2 mediated p53 pathway regulation study with "ProFectin" reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for protein-protein interaction mapping.
4. Potential diagnostic biomarker protein for monitoring HIV-1 infection.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFSQAVQTNGTQPLSKTWELSLYELQRTPQEAITDGL
EIVVSPRSLHSELMCPICLDMLKNTMTTKECLHRFCADCIITALRSGNKECPTCRKKLVSKRSL
RPDPNFDALISKIYPSRDEYEAHQERVLARINKHNNQQALSHSIEEGLKIQAMNRLQRGKKQQI
ENGSGAEDNGDSSHCSNASTHSNQEAGPSNKRTKTSDDSGLELDNNNAAMAIDPVMDGASEIEL
VFRPHPTLMEKDDSAQTRYIKTSGNATVDHLSKYLAVRLALEELRSKGESNQMNLDTASEKQYT
IYIATASGQFTVLNGSFSLELVSEKYWKVNKPMELYYAPTKEHK