



LD Biopharma, Inc.
9924 Mesa Rim Road Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human id1-11R Protein
Catalog Number: hTF-0127
Manufacturer: LD Biopharma, Inc.

Introduction

Human inhibitor of DNA binding 1, dominant negative helix-loop-helix protein (ID1), transcript variant 1 gene encodes the transcription factor protein id1. The protein encoded by this gene is a helix-loop-helix (HLH) protein that can form heterodimers with members of the basic HLH family of transcription factors. Id1 protein has no DNA binding activity and therefore can inhibit the DNA binding and transcriptional activation ability of basic HLH proteins with which it interacts. Id1 protein may play a role in cell growth, senescence, differentiation, and promotes cancer tumor morphology, cell cycle/epithelial to mesenchymal transition by influencing AP1, TNF, TGF β and estradiol pathways.

Recombinant human id1 protein was constructed with C-terminal tag of 11 arginine domain, which efficiently delivery protein intracellularly. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Incubating this protein in culture mediums at concentration of 2 -8 $\mu\text{g/ml}$ may be used for studying of human epithelial cell differentiation in vitro or various cancer research.

Gene Symbol: id1
Accession Number: NP_002156
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 7 days.



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Key References

Schmidt, M., et al. *Inhibition of differentiation 1(id1) promotes cell survival and proliferation of prostate epithelial cells.* Cell. Mol. Biol.Lett. 15(2), 272-295 (2010)

Hongyan Zhou, et al. *Generation of induced pluripotent stem cells using recombinant protein.* Cell Stem Cell. Vol 4. Issue 5: 381-384 (2009)

Applications

1. Protein transduction for epithelial cells in vitro cell differentiation.
2. Active recombinant protein, may be used for ELISA based DNA/Protein binding assay.
3. As specific protein substrate for kinase assay.
4. Immunogen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. DNA binding assay: Not tested yet.

Recombinant Protein Sequence

29aa_Tag_KVASGSTATAAAGPSCALKAGKTASGAGEVVRCLSEQSVAISRCAGGAGARLPAL
LDEQQVNVLVLYDMNGCYSRLKELVPTLPQNRKVKVEILQHVIDYIRDLQLELNSESEVGTGG
RGLPVRAPLSTLNGEISALTAEAACVPADDRILCRLEESGGGSPGRRRRRRRRRR