



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

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ID-11R Protein
Catalog Number: HTF-0127
Manufacturer: LD Biopharma, Inc. USA

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.

Full-length human ID1 cDNA (154aa, derived from BC000613) was constructed with codon optimization using gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal and 11 arginine (11R) tag at its C-terminal. It 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: ID1 (BHLHB24; ID)
Accession Number: NP_002156
Species: Human
Size: 50 μ g / 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, Glycerol & others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References



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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. May be used for in vitro ID1 mediated gene transcription regulation study in epithelial cell's differentiation by intracellular delivery of this ID1-11R protein directly in vitro cell culture.
2. May be used for mapping ID1 protein-protein interaction.
3. May be used as ID1 specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human ID1 immunogen for specific antibody production.

Quality Control

Purity: > 92 % by SDS-PAGE.

Recombinant Human ID1-11R Protein Sequence (21.7 kD)

MASMTGGQQMGRGHHHHHENLYFQGGEFKVASGSTATAAAGPSCALKAGKTASGAGEVVRCLS
EQSVAISRACAGGAGARLPALLDEQQVNVLLYDMNGCYSR**L**KELVPTLPQNRKVSKEILQHVID
YIRDLQLELNSESEVGTTPGGRGLPVRAPLSTLNGEISALTAEEACVPADDRILCRESGGGSPG
RRRRRRRRRRR