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 ID2 Protein
Catalog Number: hTF-1934
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human DNA-binding protein inhibitor (ID-2) gene belongs to the inhibitor of DNA binding family, members of which are transcriptional regulators that contain a helix-loop-helix (HLH) domain but not a basic domain. Members of the inhibitor of DNA binding family inhibit the functions of basic helix-loop-helix transcription factors in a dominant-negative manner by suppressing their heterodimerization partners through the HLH domains. ID2 protein may play a role in negatively regulating cell differentiation. ID2 gene is highly expressed in early fetal tissues, including those of the central nervous system.

Full-length human ID2 cDNA (133 aa) was constructed with N-terminal codon optimization gene synthesis and expressed with a small T7-His-TEV cleavage site Tag (31aa) fusion at its N-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:	ID2 (bHLHb26; GIG8; ID2A; ID2H)
Accession Number:	NP_002157.2
Species:	Human
Size:	40 µg / Vial
Composition:	0.4 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

Lee SB, et al., *An ID2-dependent mechanism for VHL inactivation in cancer*. Nature 529 (7585), 172-177 (2016)

Wieczorek A et al., *The Role of Id2 Protein in Neuroblatoma in Children*. Pathol. Oncol. Res. 21 (4), 999-1004 (2015)

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Zhao Z, et al., *Downregulation of Id2 increases chemosensitivity of glioma.* Tumour Biol. 36 (6), 4189-4196 (2015)

Lasorella A, et al., *Id2 specifically alters regulation of the cell cycle by tumor suppressor proteins.* Mol. Cell. Biol. 16 (6), 2570-2578 (1996)

Applications

1. May be used for in vitro ID2 mediated gene transcription regulation study for neuronal cells by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping ID2 protein-protein interaction.
3. May be used as enzymatic substrate for various proteases.
4. Potential biomarker protein for tumor treatment / prognosis, such as neuroblastoma.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFELKAFSPVRSVRKNSLSDHSLGISRSKTP
VDDPMSLLYNMNDCYSKLKELVPSIPQNKKVSKMEILQHVIDYILDLQIALDSHPTIVSL
HHQRPGQNQASRTPLTTLNTDISILSLQASEFPSELMSNDSKALCG