



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 ALX1 Protein
Catalog Number: hTF-2029
Manufacturer: LD Biopharma, Inc.

Introduction

Human ALX homeobox protein 1 (ALX1) encodes a sequence-specific DNA-binding transcription factor that binds palindromic sequences within promoters and may activate or repress the transcription of a subset of genes. Most probably it regulates the expression of genes involved in the development of mesenchyme-derived craniofacial structures. Early on in development, it plays a role in forebrain mesenchyme survival. ALX1 may also induce epithelial to mesenchymal transition (EMT) through regulating of *snai1* expression.

Full-length human ALX1 cDNA (325 aa) 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. 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: ALX1 (CART1; FND3; HEL23)
Accession Number: NP_008913.2
Species: Human
Size: 10 µg / 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, DTT and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

Key References

Ullah A, ET AL., *Exome sequencing revealed a novel splice site variant in the ALX1 gene underlying frontonasal dysplasia*. Clin. Genet. 91 (3), 494-498 (2017)



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Yao W, ET AL., *ALX1 promotes migration and invasion of lung cancer cells through increasing snail expression*. Int J Clin Exp Pathol 8 (10), 12129-12139 (2015)

Yang M, ET AL., *Depletion of ALX1 causes inhibition of migration and induction of apoptosis in human osteosarcoma*. Tumour Biol. 36 (8), 5965-5970 (2015)

Applications

1. May be used for in vitro ALX1 mediated gene transcription regulation study for various cells by intracellular delivery of this protein with protein delivery reagent such as ProFectin reagent kit.
2. May be used for mapping ALX1 protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As Immunogen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGFEFLSEKFALKSPPSKNSDFYMGAGGPLEHVMETLD
NESFYSKASAGKCVQAFGLPRAEHHVRLERTSPCQDSSVNYGITKVEGQPLHTELNRAMDNCN
SLRMSPVKGMQEKGELDELGDKCDSNVSSSKRRHRRTTFTSLQLEELEKVFQKTHYPDVYVREQ
LALRTELTEARVQVWFQNRRAKWRKRERYGQIQQAKSHFAATYDISVLPRTDSPQIQNNLWAG
NASGGSVVTSCMLPRDTSSCMTPTYSHSPRTDSSYTGFSNHQNQFSHVPLNNFFTDSSLTGATNG
HAFETKPEFERRSSSIAVLRMKAKEHTANISWAM