



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 CITED2 Protein
Catalog Number: hTF-1537
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human cbp/p300-interacting transactivator 2 (CITED2) gene is transcriptional co-activator of the p300/CBP-mediated transcription complex. Acts as a bridge, link TFAP2 transcription factors and the p300/CBP transcriptional co-activator complex in order to stimulate TFAP2-mediated transcriptional activation. Positively regulates TGF- β signaling through its association with the SMAD/p300/CBP-mediated transcriptional co-activator complex. Stimulates the peroxisome proliferator-activated receptors PPAR α transcriptional activity. Enhances estrogen-dependent transactivation mediated by estrogen receptors. Acts also as a transcriptional co-repressor; interferes with the binding of the transcription factors HIF1A or STAT2 and the p300/CBP transcriptional co-activator complex. Participates in sex determination and early gonad development by stimulating transcription activation of SRY. Plays a role in controlling left-right patterning during embryogenesis; potentiates transcriptional activation of NODAL-mediated gene transcription in the left lateral plate mesoderm (LPM). Plays an essential role in differentiation of the adrenal cortex from the adrenogonadal primordium (AGP); stimulates WT1-mediated transcription activation thereby up-regulating the nuclear hormone receptor NR5A1 promoter activity. It also associates with chromatin to the PITX2 P1 promoter region. Mutations in this gene are a cause of cardiac septal defects. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

Full-length human CITED2 cDNA (269aa, Isoform-I) was constructed with codon optimization technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E.coli as inclusion bodies. It was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: CITED2 (ASD8; MRG-1; P35SRJ; VSD2)
Accession Number: NP_006070
Species: Human



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- Size:** 20 µg / Vial
- Composition:** 0.2 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 -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

Key References

Lau WM, et al. *CITED2 modulates estrogen receptor transcriptional activity in breast cancer cells*. Biochem. Biophys. Res. Commun. 437 (2), 261-266 (2013)

Sperling S, et al., *Identification and functional analysis of CITED2 mutations in patients with congenital heart defects*. Hum. Mutat. 26 (6), 575-582 (2005)

Glenn DJ et al., *MRG1 binds to the LIM domain of Lhx2 and may function as a coactivator to stimulate glycoprotein hormone alpha-subunit gene Expression*. J. Biol. Chem. 274 (51), 36159-36167 (1999)

Applications

1. May be used for in vitro CITED2 mediated p300/CBP transcription complex activities' regulation for *various human cells' differentiation and HIF1a pathway signaling* 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 CITED2 protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGADHMMAMNHGRFPDGTNGLHHHPAHRMGMGQFPSPHHH
QQQPQHAFNALMGEHIHYGAGNMNATSGIRHAMGPGTVNGGHPPSALAPAARFNNSQFMGPPV
ASQGGSLPASMQLQKLNQYFNHHPYPHNHYMPDLHPAAGHQMNGTNQHFRDCNPKHSGGSSTP
GGSGGSSTPGGSGSSSGGGAGSSNSGGSGSGNMPASVAHVPAAMLPPNVIDTDFIDEEVLMSL
VIEMGLDRIKELPELWLGGQNEFDFTDFVCKQQPSRVSC