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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human JDP2-11R Protein
Catalog Number: hTF-1747
Manufacturer: LD Biopharma, Inc.

Introduction

Human Jun dimerization protein 2 (JDP2) gene encodes a basic leucine zipper (bZIP) protein displaying a high degree of homology with the stress inducible transcription factor, ATF3. Both proteins bind to cAMP and TPA response elements and repress transcription by multiple mechanisms. JDP2 was demonstrated to be direct binder for ATF3 with HDACs 1, 2–6 and 10. JDP2 has antagonist activity for cJun, recent data indicated that by inhibiting cJun activities will enhance iPS generation efficiency in vitro.

Full-length human JDP2 cDNA (162 aa, Isoform-I) was constructed with codon optimization by gene synthesis and expressed with N-terminal 29aa Tag and C-terminal flexible linker domain & eleven arginine (11R Tag) as membrane penetration domain to enable penetration across the plasma membrane of mammalian cells. This protein is 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: JDP2 (JUNDM2)
Accession Number: NP_569736
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, 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

Jing Liu, et al., *The oncogene c-Jun impedes somatic cell reprogramming*. Nature Cell Biology. Vol 17, 856 - 867 (2015)



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Darlyuk-Saadon I, et al., *The bZIP repressor proteins, c-Jun dimerization protein 2 and activating transcription factor 3, recruit multiple HDAC members to the ATF3 promoter.* Biochim. Biophys. Acta 1819 (11-12), 1142-1153 (2012)

Murata T, et al., *Involvement of Jun dimerization protein 2 (JDP2) in the maintenance of Epstein-Barr virus latency.* J. Biol. Chem. 286 (25), 22007-22016 (2011)

Hongyan Zhou, et al. *Generation of Induced Pluripotent Stem Cells Using Recombinant Proteins.* Cell Stem Cell. 2009. 4: 381-384.

Applications

1. May be used for in vitro human JDP2 mediated iPS generation mechanism, or its gene specific transcription regulation study for cJun pathway by intracellular delivery of this protein with ProFectin reagent.
2. May be used for zJDP2 protein-protein interaction assay.
3. May be used as specific substrate protein for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHENLYFQGGEFMPGQIPDPSVTTGSLPGLGPLTGLPSSALTVEELK
YADIRNLGAMIAPLHFLEVKLGKRPQPVKSELDEEEERRKRRREKNKVA AACRCRNKKKERTEFL
QRESERLELMNAELKTQIEELKQERQQLILMLNRHRPTCIVRTDSVKTP ESEGNPLLEQLEKKE
SGGGGSPGRRRRRRRRRRR