LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human MYOZ2 Protein
Catalog Number: hRP-0861
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human Myozenin-2 (MYOZ2) gene belongs to a family of sarcomeric proteins that bind to calcineurin, a phosphatase involved in calcium-dependent signal transduction in diverse cell types. These family members tether calcineurin to alpha-actinin at the z-line of the sarcomere of cardiac and skeletal muscle cells, and thus they are important for calcineurin signaling. mRNA profiling data indicated that MYOZ2 dominantly expressed in human heart tissue. Mutations in this gene cause cardiomyopathy familial hypertrophic type 16, a hereditary heart disorder.

Full-length human MYOZ2 (264 aa) gene was constructed with 15 aa N-terminal T7 tag and 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:	MYOZ2 (C4ORF5; CMH16; CS-1)
Accession Number:	NP_057683
Species:	Human
Size:	50 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 30 days.

Key References

Posch,M.G., et al., *Sequence analysis of myozenin 2 in 438 European patients with familial hypertrophic cardiomyopathy*. Med. Sci. Monit. 14 (7), CR372-CR374 (2008)

von Nandelstadh,P., et al., *A class III PDZ binding motif in the myotilin and FATZ*

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families binds enigma family proteins: a common link for Z-disc myopathies. Mol. Cell. Biol. 29 (3), 822-834 (2009)

Applications

1. May be used for in vitro calcium-dependent signal transduction pathway regulation study for cardiomyocytes with intracellular delivery of this protein.
2. As soluble / native protein, may be used as enzymatic substrate protein for kinase and ubiquitin assay development.
3. May be used for mapping MYOZ2 protein-protein interaction.
4. Potential biomarker protein for monitoring human cardiomyocytes damage in various diseases.
5. May be used as antigen for specific antibody development.

Quality Control

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

Recombinant Protein Sequence

MASMTGGQQMGRGEFMLSHNTMMKQRKQQATAIMKEVHGNDVDGMDLGKKVSIPRDIMLEELSH
LSNRGARLFKMRQRRSDKYTFENFQYQSRAQINHSIAMQNGKVDGSNLEGGSQQAPLTPPNTPD
PRSPPNPDNIAPGYSGPLKEIPPEKFNTTAVPKYYQSPWEQAISNDPELLEALYPKLFKPEGKA
ELPDYRSFNRVATPFGGFEKASRMVKFKVPDFELLLLTDPRFMSFVNPLSGRRSFNRTPKGWIS
ENIPIVITTEPTDDTTVPESEDL