



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 HSPB7 Protein
Catalog Number: hRP-0746
Manufacturer: LD Biopharma, Inc.

Introduction

Human HSPB7, encoding the small heat shock protein α Hsp, is the functionally most plausible candidate gene with SNP status link to Dilated cardiomyopathy (DCM) in human genomic. HSPB7 is known to be expressed in cardiovascular and insulin-sensitive tissues. In general, the expression and activation of heat shock proteins is influenced by elevated temperatures as well as ischemia, hypoxia and acute cellular stress. In the aging skeletal muscle increase of α Hsp protein content was observed. HSPB7 was shown to be constitutively localized under non-stressful conditions to nuclear splicing speckles and may influence mRNA processing. Recent data suggest co-localization is between HSPB7 and α -B-crystallin in the z-band of cardiac tissue and interaction with other small heat shock proteins.

Full-length human HSPB7 (170 aa) gene was constructed with 15 N-terminal T7 tag and expressed in E.coli as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: HSPB7 (α HSP)
Accession Number: NP_0552398
Species: Human
Size: 50 μ g / 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

Ke,L., et al., *HSPB1, HSPB6, HSPB7 and HSPB8 protect against RhoA GTPase-induced*



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remodeling in tachypaced atrial myocytes. PLoS ONE 6 (6), E20395 (2011)

Stark,K., et al., Genetic association study identifies HSPB7 as a risk gene for idiopathic dilated cardiomyopathy. PLoS Genet. 6 (10), E1001167 (2010)

Matkovich,S.J., et al., Cardiac signaling genes exhibit unexpected sequence diversity in sporadic cardiomyopathy, revealing HSPB7 polymorphisms associated with disease. J. Clin. Invest. 120 (1), 280-289 (2010)

Vos,M.J., et al., HSPB7 is a SC35 speckle resident small heat shock protein. Biochim. Biophys. Acta 1793 (8), 1343-1353 (2009)

Applications

1. May be used for in vitro human cardiomyocytes differentiation / stress regulations study with recombinant HSPB7 protein intracellular delivery methods.
2. As soluble/native protein, may be used as enzymatic substrate protein for Kinase, ubiquitin assay.
3. May be used for mapping HSPB7 protein binding partner in protein–protein interaction assay.
4. May be used as antigen for specific antibody development.

Quality Control

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

Recombinant Protein Sequence

MASMTGGQQMGRGEFMSHRTSSTFRAERSFHSSSSSSSSSTSSSASRALPAQDPPMEKALSMFS
DDFGSFM RPHSEPLAFPARPGGAGNIKTLGDAYEFAVDVRDFSPEDIIVTTSNNHIEVRAEKLA
ADGTVMNTFAHKCQLPEDVDPTSVTSALREDGSLTIRARRHPHTEHVQQTFRTEIKI