



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 DNAJB1 Protein
Catalog Number: hRP-1572
Manufacturer: LD Biopharma, Inc.

Introduction

Human dnaJ homolog subfamily B member 1 (DNAJB1, also named as HSP40) gene belongs to member of heat shock protein family. The evolutionarily conserved J domain protein, DNAJ/HSP40, function primarily by stimulating the adenosinetriphosphatase (ATPase) activity of other chaperones, such as HSP70. Higher eukaryotes have a variety of HSP40 family members to regulate the substrate specificity of chaperones. A few types of HSP40 proteins have been shown to dramatically suppress toxicity in polyQ disease models. Over-expression of HSP70 or combination of HSP70 and HSP40 reduced aggregate formation and provided cellular protection, suggesting that HSP70 and HSP40 might function together in chaperoning aggregation-prone proteins.

Full-length human DNAJB1 (339aa, derived from BC019827) gene was constructed with 29 aa N-terminal T7 / His / TEV cleavage site Tags 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: DNAJB1 (Hdi1; Hsp40; HSPF1; RSPH16B; Sis1)
Accession Number: NP_006136.1
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, 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

Honeyman JN, et al., *Detection of a recurrent DNAJB1-PRKACA chimeric transcript in*



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fibrolamellar hepatocellular carcinoma. Science 343 (6174), 1010-1014 (2014)

Qi M, et al., *DNAJB1 stabilizes MDM2 and contributes to cancer cell proliferation in a p53-dependent manner*. Biochim. Biophys. Acta 1839 (1), 62-69 (2014)

Ormsby AR, et al., *A platform to view huntingtin exon 1 aggregation flux in the cell reveals divergent influences from chaperones hsp40 and hsp70*. J. Biol. Chem. 288 (52), 37192-37203 (2013)

Kuo Y, et al., *Suppression of polyglutamine protein toxicity by co-expression of a heat-shock protein 40 and a heat-shock protein 110* Cell Death Dis 4, E833 (2013)

Applications

1. May be used as auto-antibodies detection reagent, which will react with sera of some auto-immuno-diseases and cancer patients.
2. May be used for in vitro DNAJB1 mediated polyglutamin degradation pathway regulation study by intracellularly delivery this protein with “ProFectin” reagent.
3. May be used for DNAJB1 protein-protein interaction assay.
4. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
5. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGFEGKDYQTLGLARGASDEEIKRAYRRQALRYHPDKN
KEPGAEEKFKEIAEAYDVLSDPRKREIFDRYGEEGLKGSGPSGGSGGGANGTSFSYTFHGDPHA
MFAEFFGGRNPFDTFFGQRNGEEGMDIDDPFSGFPMGMGGFTNVNFGRSRSAQEPARKKQDPPV
THDLRVSLEEIYSGCTKKMKISHKRLNPDGKSIRNEDKILTIKVKGWKEGTKITFPKEGDQTS
NNIPADIVFVLKDKPHNIFKRDGSDVIYPARISLREALCGCTVNVPTLDGRTIPVVFKDVIIRPG
MRRKVPGEGLPLPKTPEKRGDLIEFEVIFPERIPQTSRTVLEQVLP I