



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 Pax7 Protein
Catalog Number: hTF-1073
Manufacturer: LD Biopharma, Inc.

Introduction

Human Pax7 gene is a member of the paired box (PAX) family of transcription factors. Members of this gene family typically contain a paired box domain, an octapeptide, and a paired-type homeodomain. These genes play critical roles during fetal development and cancer growth. The specific function of the paired box 7 gene is unknown but speculated to involve tumor suppression since fusion of this gene with a forkhead domain family member has been associated with alveolar rhabdomyosarcoma. 3 isoforms have been found for Pax7 gene.

Full-length human Pax7 cDNA (520aa, Isoform_1) was constructed with codon optimization 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. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol: Pax7 (HUP1; Pax7b; RMS2)
Accession Number: NP_002575
Species: Human
Size: 20 µg / Vial
Composition: 0.20 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 7 days.

Key References

Yang, X.L., et al., *Detection of PAX3/PAX7-FKHR fusion transcripts in rhabdomyosarcoma and other small round cell tumors by 1-step reverse transcriptase polymerase chain reaction: a novel tool for diagnosis and differentiation.* Ann Diagn Pathol 16



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

(2), 107-111 (2012)

Charytonowicz,E., et al., *PAX7-FKHR fusion gene inhibits myogenic differentiation via NF-kappaB upregulation.* Clin Transl Oncol 14 (3), 197-206 (2012)

Dumont,S.N., et al., *PAX3/7-FOXO1 fusion status in older rhabdomyosarcoma patient population by fluorescent in situ hybridization.* J. Cancer Res. Clin. Oncol. 138 (2), 213-220 (2012)

Seger,C., et al., *Analysis of Pax7 expressing myogenic cells in zebrafish muscle development, injury, and models of disease.* Dev. Dyn. 240 (11), 2440-2451 (2011)

Applications

1. May be used for in vitro Pax7 mediated muscle progenitor differentiation regulation 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 protein-protein interaction mapping.
4. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFAALPGTVPRMMRPAPGQNYPRTGFPLEVSTPLGQG
RVNQLGGVFINRPLPNHIRHKIVEMAHHGIRPCVISRQLRVSHGCVSKILCRYQETGSIRPGA
IGGSKPRQVATPDVEKKIEEYKRENPGMFSWEIRDRLKDGHCDRSTVPSGLVSSISRVLRIKF
GKKEEEDKEDDGEKKAKHSIDGILGDKGNRLDEGSDVESEPDLPKQRRSRTTFTAEQ
LEELEKAFERTHYDITYTREELAQRTKLTEARVQVWF'SNRRARWRKQAGANQLAAFNHLPPGGF
PPTGMPTLPPYQLPDSTYPTTTISQDGGSTVHRPQPLPPSTMHQGLAAAAAADTSSAYGARH
SFSSYSDSFMNPAAPSNHMNPVSNGLSPQVMSILGNPSAVPPQPQADFSISPLHGGLDSATSIS
ASCSQRADSIKPGDSLPTSQAYCPPTYSTTGYSVDPVAGYQYQYQYQSECLVPWASPVPIPSPT
PRASCLFMESYKVVSGWGMSISQMEKLLKSSQMEQFT