



LD Biopharma, Inc.
9924 Mesa Rim Road, Suite B
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant Human SPIB Protein
Catalog Number: hTF-1910
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human transcription factor Spi-B gene is a transcriptional activator that binds to the PU-box (5'-GAGGAA-3') and acts as a lymphoid-specific enhancer. Promotes development of plasmacytoid dendritic cells (pDCs), also known as type 2 DC precursors (pre-DC2) or natural interferon (IFN)-producing cells. These cells have the capacity to produce large amounts of interferon and block viral replication. It may be required for B-cell receptor (BCR) signaling, which is necessary for normal B-cell development and antigenic stimulation. Four transcript variants encoding different isoforms have been found for SPIB gene.

Full-length human SPIB cDNA (261aa. Isoform-1) was constructed with codon optimization using gene synthesis technology and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. It was 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: SPIB (SPI-B)
Accession Number: NP_003112
Species: Human
Size: 20 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, 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

Zhou Y, et al., *Transcriptional repression of plasma cell differentiation is orchestrated by aberrant over-expression of the ETS factor SPIB in Waldenstrom macroglobulinaemia*. Br. J. Haematol. 166 (5), 677-689 (2014)



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Asai T et al., *The SRC family tyrosine kinase HCK and the ETS family transcription factors SPIB and EHF regulate transcytosis across a human follicle-associated epithelium model*. J. Biol. Chem. 288 (15), 10395-10405 (2013)

Applications

1. May be used for in vitro SPIB mediated gene transcription regulation study for B cells or plasmacytoid dendritic cells differentiation by intracellular delivery of this protein with protein-delivery reagent such as “ProFectin” reagent kit.
2. May be used for mapping SPIB protein-protein interaction.
3. May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. Potential biomarker protein for tumor prognosis, such as human blastic plasmacytoid dendritic cell neoplasms.
5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGEFLALEAAQLDGPHFSCLYPDGVFYDLDSCKHSSYPD
SEGAPDSLWDWTVAPPVPATPYEAFDPAAAAF SHPQAAQLCYEPPTYSPAGNLELAPSLEAPGP
GLPAYPTENFASQTLVPPAYAPYPSPVLSEEDLPLDSPALEVSDSESEALVAGPEGKGSEAG
TRKKLRLYQFLLGLLTRGDMRECVWWVEPGAGVFQFSSKHKELLARRWGQQKGNRKRMTYQKLA
RALRNYAKTGEIRKVKRKLTYQFDSALLPAVRRRA