



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human SPON2 Protein
Catalog Number: hRP-1104
Manufacturer: LD Biopharma, Inc.

Introduction

Human spondin 2 (SPON2) is a secreted ECM protein that belongs to the mindin / F-spondin family, comprises N-terminal FS1 and FS2 domains and C-terminal thrombospondin type 1 repeats (TSR). The FS domain mediates integrin binding, which is required for inflammatory cell recruitment and T-cell priming. The TSR domain recognizes pathogen-associated molecular patterns and initiates innate immune responses. In addition, SPON2 protein has been shown to promote the outgrowth and adhesion of embryonic hippocampal neurones and to inhibit angiogenesis. Human SPON2 also plays a role in infectious diseases and cancer pathogenesis. Recent data indicated that SPON2 acts as a novel anti-hypertrophic ECM protein that prevents maladaptive remodeling and the transition to HF by blocking AKT/glycogen synthase kinase 3 β (GSK3 β) and transforming growth factor (TGF)- β 1–Smad signalling.

Full-length mature human SPON2 cDNA (27–331aa, derived from BC036341) 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: SPON2 (DIL-1; M-SPONDIN; MINDIN)
Accession Number: NP_036577
Species: Human
Size: 50 μ g / Vial
Composition: 0.5 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.



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Key References

Qian,X., et al., *Spondin-2 (SPON2), a more prostate-cancer-specific diagnostic biomarker*. PLoS ONE 7 (5), E37225 (2012)

Yan,L., et al., *Cardiac-specific mindin overexpression attenuates cardiac hypertrophy via blocking AKT/GSK3beta and TGF-beta1-Smad signaling*. Cardiovasc. Res. 92 (1), 85-94 (2011)

Applications

1. May be used for in vitro SPON2 mediated cardiac hypertrophy regulation study with this protein as either coating matrix protein or soluble factor.
2. May be used for FBLN2 protein-protein interaction assay.
3. Potential diagnostic biomarker protein for prostate cancer.
4. As antigen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFQPLGGESIC SARAPAKYSITFTGKWSQTAFPKQYP
LFRPPAQWSSLLGAAHSSDYSMWRKNQYVSNGLRDFAEERGEAWALMKEIEAAGEALQSVHAVFS
APAVPSGTGQTSAELEVQRRHSLVSFVVRIVPSPDWFVGVDSLDLDCGDRWREQAALDLYPYDA
GTDSGFTFSPPNFATIPQDTVTEITSSSPSHPANSFYYPRLKALPPIARVTLVRLRQSPRAFIP
PAPVLP SRDNEIVDSASVPETPLDCEVSLWSSWGLCGGHCGR LGTKSRTRYVRVQPANNGSPCP
ELEEEAECPDNCV