



LD Biopharma, Inc.
7384 Trade Street, Suite B
San Diego, CA 92121
Tel: 858-876-8266
<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP-Human **SPIN4** Protein
Catalog Number: HTF-3583
Manufacturer: LD Biopharma, Inc. USA

Introduction

All five members of SPIN family contain three Tudor methyl reader domains, and therefore SPIN4 (Spindlin-4) is thought to bind methylated histones. SPIN4 exhibits H3K4me3-binding activity. Recent data indicated that DCAF16 interacts with and ubiquitinates SPIN4. DCAF16 is a substrate recognition component of Cullin-RING E3 ubiquitin ligases that can be targeted by electrophilic PROTACs (PROteolysis Targeting Chimeras) to promote the nuclear-restricted degradation of proteins.

Full-length human SPIN4 cDNA (248aa) was constructed with codon optimization gene synthesis and expressed with YFP Protein as N-terminal (YFP; 256aa) fusion protein 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: SPIN4
Accession Number: NP_001012986.2
Species: Human
Size: 50µg / 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 and others.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References

Zhang X, et al., *SPIN4 Is a Principal Endogenous Substrate of the E3 Ubiquitin Ligase DCAF16*. *Biochemistry* 60 (9), 637-642 (2021)



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Staub E, et al., *The Spin/Ssty repeat: a new motif identified in proteins involved in vertebrate development from gamete to embryo*, Genome Biol 3, RESEARCH0003. (2002)

Applications

1. May be used for in vitro SPIN4 protein mediated gene transcription regulation in DCAF16 pathway for various cells study using intracellular delivery of recombinant human YFP- SPIN4 protein with protein delivery reagent such as ProFectin.
2. May be used for SPIN4 protein-protein interaction assay.
3. May be used as specific substrate protein for SPIN4 specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human SPIN4 antigen for its specific antibody production.

Quality Control

Purity: > 92 % by SDS-PAGE.

YFP protein: **Ex λ** = 517nm, and **Em λ** = 530nm.

Recombinant **YFP**- Human SPIN4 Fusion Protein Sequence (57.7 kD)

MK**HHHHH**QVSKGEELFTGVVPILVELDGDVNGHKFSVSGEGEGDATYGKLTLLCTTGKLPV
PWPTLVTTLGYGVCFAFYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTL
VNRIELKGI DFKEDGNILGHKLEYNYN SHNVYITADKQKNGIKANFKIRHNIEDGGVQLADHYQ
QNTPIGDGPVLLPDNHYLSYQSALFKDPNEKRDHMLLEFLTAAGITEGMNELYK**GSENL**Y**FQG**
EFSPPTVPPMGVDGVSAYLMKKRHRTHRKQRKPTFLTRRNIVGCRIQHWKEGNEPVEQWKGTV
LEQVSVKPTLYIIKYDGKDSVYGLELHRDKRVLALEILPERVPTPRIDSRLADSLIGKAVEHVF
EGEHGTDKDEWKGMLARAPVMDTWFYITYEKDPVLYMYTLLDDYKDGLRIIPDSNYFPPTAEQ
EPGEVVDSL VGKQVEHAKDDGSKRTGIFIHQVVAKPSVYFIKFDDDIHIYVYGLVKTP