LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human WISP2 Protein
Catalog Number: hRP-1132
Manufacturer: LD Biopharma, Inc.

Introduction

Human WISP2 gene encodes a member of the WNT1 inducible signaling pathway (WISP) protein subfamily, which belongs to the connective tissue growth factor (CTGF) family. WNT1 is a member of a family of cysteine-rich, glycosylated signaling proteins that mediate diverse developmental processes. The CTGF family members are characterized by four conserved cysteine-rich domains: insulin-like growth factor-binding domain, von Willebrand factor type C module, thrombospondin domain and C-terminal cystine knot-like (CT) domain. Human WISP2 protein lacks the CT domain which is implicated in dimerization and heparin binding. It is 72% identical to the mouse protein at the amino acid level. This gene may be downstream in the WNT1 signaling pathway that is relevant to malignant transformation. Its expression in colon tumors is reduced while the other two WISP members are overexpressed in colon tumors. It is expressed at high levels in bone tissue, and may play an important role in modulating bone turnover.

Full-length mature protein of human WISP2 cDNA (24 - 250aa, derived from BC064379) 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:	WISP2 (CCN5; CT58; CTGF-L)
Accession Number:	NP_003872
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, arginine, DTT and Glycerol.

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Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Hammarstedt,A., et al., *WISP2 regulates preadipocyte commitment and PPARgamma activation by BMP4*. Proc. Natl. Acad. Sci. U.S.A. 110 (7), 2563-2568 (2013)

Dahlman,I., et al., *Functional annotation of the human fat cell secretome*. Arch. Physiol. Biochem. 118 (3), 84-91 (2012)

Haque,I., et al., *Cysteine-rich 61-connective tissue growth factor-nephroblastoma-overexpressed 5 (CCN5)/Wnt-1-induced signaling protein-2 (WISP-2) regulates microRNA-10b via hypoxia-inducible factor-1alpha-TWIST signaling networks in human breast cancer cells*. J. Biol. Chem. 286 (50), 43475-43485 (2011)

Applications

1. May be used for in vitro WISP2 mediated BMP signaling for pre-adipocytes differentiation regulation study with this protein as either coating matrix protein or as soluble factor.
2. May be used for WISP2 protein – protein interaction assay.
3. May be used as enzymatic substrate for various proteases.
4. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHGNLYFQGGEFQLCPTPCTCPWPPPRCPLGVPLVLDGCGCCRVCAR
RLGEPCDQLHVCDASQGLVCQPGAGPGGRGALCLLAEDDSSCEVNGRLYREGETFQPHCSIRCR
CEDGGFTCVPLCSEDVRLPSWDCPHPRRVEVLGKCCPEWVCGQGGGLGTQPLPAQGPQFSGLVS
SLPPGVPCPEWSTAWGPCSTTCGLGMATRVSNQNRFCRLETQRRLCLSRPCPPSRGRSPQNSAF