



LD Biopharma, Inc.
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Tel: 858-876-8266
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ZNRF3 Extracellular Domain Protein
Catalog Number: HRP-3610
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human E3 ubiquitin-protein ligase ZNRF3 gene encodes a single pass type I membrane protein and function as E3 ubiquitin-protein ligase that acts as a negative regulator of the Wnt signaling pathway by mediating the ubiquitination and subsequent degradation of Wnt receptor complex components Frizzled and LRP6. It acts on both canonical and non-canonical Wnt signaling pathway. ZNRF3 acts as a tumor suppressor in the intestinal stem cell zone by inhibiting the Wnt signaling pathway, thereby restricting the size of the intestinal stem cell zone.

Full-length extracellular domain of human ZNRF3 cDNA (56 – 219aa) was constructed with codon optimization gene synthesis and expressed with N-terminalT7-His-TEV cleavage site Tag (29aa) fusion. This protein was expressed in E. coli as soluble protein and purified using affinity column.

Gene Symbol: ZNRF3 (RNF203; KIAA1133)
Accession Number: NP_001193927.1
Species: Human
Size: 20 µg / Vial
Composition: 0.2 mg/ml, sterile-filtered, in 20% Glycerol with PBS buffer & 1mM 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

Fraser M, et al., *Somatic driver mutation prevalence in 1844 prostate cancers identifies ZNRF3 loss as a predictor of metastatic relapse.* Nat Commun 12 (1), 6248 (2021)

Wang Z, et al., *RSPO2 silence inhibits tumorigenesis of nasopharyngeal carcinoma by ZNRF3/Hedgehog-Gli1 signal pathway.* Life Sci 282, 119817 (2021)



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Kim M, et al., *A MET-PTPRK kinase-phosphatase rheostat controls ZNRF3 and Wnt signaling*. Elife 10, e70885 (2021)

Xie Y, et al., *Interaction with both ZNRF3 and LGR4 is required for the signaling activity of R-spondin*. EMBO Rep 14 (12), 1120-1126 (2013)

Applications

1. May be used for in vitro ZNRF3 mediated various cell's activities regulation study with this recombinant ZNRF3 protein either as soluble factor or as coating matrix protein.
2. May be used for ZNRF3 protein-protein interaction assay.
3. Potential therapeutic protein, which may be used as Wnt pathway modulator (such as anti-ZNRF3 antibody) for cell therapy applications.
4. As native human ZNRF3 antigen for its specific antibody production.

Quality Control

Purity: > 92% by SDS-PAGE.

Recombinant Human ZNRF3 extracellular domain Sequence (21.6 kD)

MASMTGGQQMGRGHHHHHENLYFQGGFSGSKETAFVEVVLFESSPSGDYTTYTTGLTGRFSRA
GATLSAEGEIVQMHPLGLCENNDEEDLYEYGWVGVVVKLEQPELDPKPCLTVLGKAKRAVQRGAT
AVIFDVSENPEAIDQLNQSEDPLKRPVVYVKGADAIKLMNIVNKQKVARARIQHRPPRQPTEY
FDM