LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human TGIF2-11R Protein
Catalog Number: hTF-2055
Manufacturer: LD Biopharma, Inc.

Introduction

The protein encoded by human TGIF2 gene is a transcriptional repressor, which probably repress transcription by binding directly the 5'-CTGTCAA-3' DNA sequence or by interacting with TGF-beta activated SMAD proteins. Probably represses transcription via the recruitment of histone deacetylase proteins. TGIF2 is widely expressed. It highly expressed in heart, kidney, testis and weakly expressed in brain and prostate. .Recent data indicated that regulating TGIF2 activities may be useful to stepwise reprogramming of liver cells to a pancreatic progenitor state.

Full-length human TGIF2 cDNA (508aa) 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 and 11 arginine (11R tag) at its C-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:	TGIF2
Accession Number:	NP_068581
Species:	Human
Size:	40 µg / Vial
Composition:	0.4 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

Nuria Cerda-Esteban, et al., *Stepwise reprogramming of liver cells to a pancrease progenitor state by the transcriptional regulator TGIF2.* Nature Comminication. Article number: 14127 (2017)

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Sharma A, et al., *Role of 5'TG3'-interacting factors (TGIFs) in Vorinostat (HDAC inhibitor)-mediated Corneal Fibrosis Inhibition.* Mol. Vis. 21, 974-984 (2015)

Hu Y, et al., *MicroRNA-34a inhibits tumor invasion and metastasis in gastric cancer by targeting Tgif2.* Int J Clin Exp Pathol 8 (8), 8921-8928 (2015)

Icardi L, et al., *The Sin3a repressor complex is a master regulator of STAT transcriptional activity.* Proc. Natl. Acad. Sci. U.S.A. 109 (30), 12058-12063 (2012)

Powers SE, et al., *Tgif1 and Tgif2 regulate Nodal signaling and are required for Gastrulation.* Development 137 (2), 249-259 (2010)

Applications

1. May be used for in vitro TGIF2 mediated gene transcription regulation study for pancreatic progenitor differentiation by intracellular delivery of this protein directly in cell culture medium.

2. May be used for mapping TGIF2 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/therapeutic target protein for cancer prognosis and cancer treatment drug development.

5. As immunogen for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGEFEEKYLPELMAEKDSLDPSFTHALRLVNQEIEKFQK
GEGKDEEKYIDVVINKNMKLGQKVLIPVKQFPKFNFVGKLLGPRGNSLKRLQEETLTKMSILGK
GSMRDKAKEEELRKSGEAKYFHLNDDLHVLIEVFAPPAEAYARMGHALEEIKKFLIPDYNDEIR
QAQLQELTYLNGGSENADVPVVRGKPTLRTRGVPAPAITRGRGGVTARPVGVVVPRGTPTPRGV
LSTRGPVSRGRGLLTPRARGVPPTGYRPPPPPPTQETYGEYDYDDGYGTAYDEQSYDSYDNSYS
TPAQSGADYYDYGHGLSEETYDSYGQEEWTNSRHKAPSARTAKGVYRDQPYGRYESGGGGSPGR
RRRRRRRRRR