



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human Sox7 - 11R Protein
Catalog Number: HTF-1763
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human Sox7 gene encodes a member of the SOX (SRY-related HMG-box) family of transcription factors involved in the regulation of embryonic development and in the determination of the cell fate. Sox7 may act as a transcriptional regulator after forming a protein complex with other proteins. Sox7 may also play a role in tumorigenesis. A similar protein in mice is involved in the regulation of the wntless-type MMTV integration site family (Wnt) pathway. Sox7 binds to and activates the CDH5 promoter, hence plays a role in the transcriptional regulation of genes expressed in the hemogenic endothelium and blocks further differentiation into blood precursors. Recent data in animal models indicated that gut microbiota related chemicals such as β -resorcylic acid (β -RA) can suppress the nuclear accumulation of Sox7, which in turn reduces Bcl-2-associated X activation and inhibits granulosa cell apoptosis. These findings highlight the therapeutic potential of targeting the gut-ovary axis for fertility preservation in CIPOI (Chemotherapy-induced premature ovarian insufficiency).

Full-length human Sox7 cDNA (387aa) 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 Poly-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: Sox7
Accession Number: NP_113627
Species: Human
Size: 50 μ g / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, DTT and Glycerol.
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.



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Key References

Yinglin Feng, et al., *b-resorcylic acid released by Limosilactobacillus reuteri protects against cisplatin-induced ovarian toxicity and infertility*. Cell Reports Medicine 5. 101678, August 20 (2024)
Hayano T, et al., *SOX7 is down-regulated in lung cancer*. J. Exp. Clin. Cancer Res. 32, 17 (2013)

Chan DW, et al., *Down-regulation of Sox7 is associated with aberrant activation of Wnt/b-catenin signaling in endometrial cancer*. Oncotarget 3 (12), 1546-1556 (2012)

Li B, et al., *Decreased expression of SOX7 is correlated with poor prognosis in lung adenocarcinoma patients*. Pathol. Oncol. Res. 18 (4), 1039-1045 (2012)

Applications

- May be used for study Sox7 mediated gene transcription regulation for early embryonic cell and various cancer cells in vitro in Wnt/ β -catenin signaling pathway by intracellular delivery of recombinant Sox7 protein using ProFectin reagent.
- May be used for mapping Sox7 protein-protein interaction.
- May be used as specific substrate protein for kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
- High purified native Sox7 protein, which may be used for specific antibody production.
- Potential biomarker protein for prognostic diagnosis of lung cancer.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Human Sox7 -11R Protein Sequence (47.9 kD)

[MASMTGGQQMGRGHHHHHENLYFQGGFSGS](#)ASLLGAYPWPEGLECPALDAELSDGQSPPAVPR
PPGDKGSESRIIRPMNAFMVWAKDERKRLAVQNPDLHNAELSKMLGKSWKALTLSQKRPYVDEA



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ERLRLQHMQDYPNYKYRPRRKKQAKRLCKRVDPGFLLSSLSRDQNALPEKRSGSRGALGEKEDR
GEYSPGTALPSLRGCYHEGPAGGGGGGTPSSVDITYPYGLPTPEMSPLDVLEPEQTFSSPCQE
EHGHPRI PHLPGHPYSPEYAPSPLHCSHPLGSLALGQSPGVSMMSPPVPGCPPSPAYYSPATYH
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VPVSQVTPTGPTETSLISVLADATATYYNSYSVS **ESGGGSPGRRRRRRRRRRR**