



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant YFP-Human **TOX3-11R** Protein
Catalog Number: HTF-3444
Manufacturer: LD Biopharma, Inc. USA

Introduction

Human TOX high mobility group box family member 3 (TOX3) gene encodes a transcriptional co-activator of the p300/CBP-mediated transcription complex. It activates transactivation through cAMP response element (CRE) sites. Tox3 protects against cell death by inducing anti-apoptotic and repressing pro-apoptotic transcripts. It stimulates transcription from the estrogen-responsive or BCL-2 promoters. It is required for depolarization-induced transcription activation of the C-FOS promoter in neurons. It is associated with chromatin to the estrogen-responsive C3 promoter region. Mutation of human Tox3 gene have been linked to various cancers such as breast or ovarian cancers.

Full-length human Tox3 cDNA (575aa, derived from BC167799) 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:	Tox3	(CAGF9; TNRC9)
Accession Number:	NP_001073899	
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

Sanjeeb Kumar Saha, et al. *Tox3 regulates neural progenitor identity*.
Biochim Biophys Acta Jul; 1859(7): 833-40, (2016)



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Jones JO, et al. *Tox3 mutation in breast cancer*. PLoS One. Sep 19;8(9):e74102. (2013)

O'Flaherty E and Kaye J. *TOX defines a conserved subfamily of HMG-box proteins*. BMC Genomics 4 (1), 13 (2003)

Applications

1. May be used for in vitro Tox3 protein mediated gene transcription regulation for various cells study using intracellular delivery of recombinant human Tox3-11R protein by directly adding this protein into cell culture medium.
2. May be used for Tox3 protein-protein interaction assay.
3. May be used as specific substrate protein for Tox3 specific kinase, and ubiquitin (Sumo pathway) related enzyme functional screening assays.
4. As native human Tox3 antigen for its specific antibody production.

Quality Control

Purity: > 90 % by SDS-PAGE.

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

Recombinant **YFP**- Human Tox3-11R Fusion Protein Sequence (93.8 kD)

MKHHHHHHQVSKGEELFTGVVPIIIVELDGDVNGHKFSVSGEGEGDATYGKLTCLKLLCTTGKLPVPWPTLV
TTLGYGVQCFARYPDHMKQHDFFKSAMPEGYVQERTIFFKDDGNYKTRAEVKFEGDTLVNRIELKGI DFK
EDGNILGHKLEYNYN SHNVYITADKQKNGIKANFKIRHNI EDGGVQLADHYQONTPIGDGPVLLPDNHYL
SYQSALFKDPNEKRDMVLLLEFLTAAGITEGMNELYK**RS**DVRFYPAAAGDPASLDFAQCLGYYGYSKFGN
NNNYMNAEANNAFFAASEQTFHTPSLGDEEFEI PPI T P P P E S D P A L G M P D V L L P F Q A L S D P L P S Q G S E F
TPQFPPQSLDLPSITISRNLVEQDGV LHSSGLHMDQSHTQVSQYRQDPSLIMRSIVHMTDAARSGVMPPA
QLTTINQSQLSAQGLNLGGASMPHTSPSP PASKSATPSPSSS INEEDADEANRAIGEKRAAPDSGKKPK
TPKKKKKDPNEPQKPVSA YALFFRDTQAAIKGQNP NATFGEVSKIVASMWDSL GEEQKQVYKRKTEAAK
KEYLKALAA YRASLVSKAAAE SAEAQ TIRSVQQT LASTNLTSSLLLNTPLSQHGTVSASPQTLQQSLPRS
IAPKPLTMR LPMNQIVTSVTIAANMPSNIGAPLISSMGTTMVGSAPSTQVSPSVQTOQHQMQLQQQQQQQ
QQQMQQMQQQQLQQHQM HQQIQQQMQQQHFQHHMQQHLQQQQQHLQQQINQQQLQQQLQRLQLQQLQHM
QHQSQPSRQHSPVASQITSPIPAIGSPQPASQQHQSQIQSQTQTQVLSQVSI F**ESGGGSPGRRRRRRR**
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