



**LD Biopharma, Inc.**  
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## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human TRIP-Br2 Protein  
**Catalog Number:** hTF-1697  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human SERTA domain-containing protein 2 ( SERTAD2, also know as TRIP-Br2 ) is a member of a novel family of mammalian transcriptional co-regulators comprised of five members, four of which have been shown to modulate E2F-dependent transcriptional activities. In adipose tissue, TRIP-Br2 plays a role in fat lipolysis & thermogenesis by recruiting PHD zinc finger- and/or bromodomain-containing transcriptional co-regulators, such as p300/CBP and KRIP-1, to E2F1/DP1 transcription complexes assembled on E2F-responsive promoters. In E2F/DP1 pathway, TRIP-Br2 regulates adipocyte biology and energy metabolism. Recent evidence also suggests that besides TRIP-Br2's roles in cell cycle regulation, fat energy metabolism, its *Drosophila* homolog protein "TARANIS" is molecule, which regulates normal sleep pattern.

Full-length human TRIP-Br2 (313aa, derived from BC074789) gene was constructed using gene synthesis technology with codon optimization. 31 aa (T7 / His / TEV cleavage site) Tag was fused to LMX1B N-terminal. This protein was expressed in *E.coli* as inclusion bodies. It was refolded using our unique "temperature shift inclusion body refolding" technology and chromatographically purified.

**Gene Symbol:** TRIP-Br2 (SERTAD2; Sei-2)  
**Accession Number:** NP\_055570.1  
**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, Sucrose and DTT.  
**Storage:** In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 7 days.

### Key References

Afonso DJ, et al., *TARANIS functions with cyclin A and Cdk1 in a novel arousal center to*



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*control sleep in Drosophila.* Curr Biol. Jun 29; 25 (13): 1717-1726 (2015)

Liew CW, et al., *Ablation of TRIP-Br2, a regulator of fat lipolysis, thermogenesis and oxidative metabolism, prevents diet-induced obesity and insulin resistance.* Nat. Med. 19 (2), 217-226 (2013)

Cheong JK, et al., *TRIP-Br2 promotes oncogenesis in nude mice and is frequently overexpressed in multiple human tumors.* J Transl Med 7, 8 (2009)

Hsu SI, et al., *TRIP-Br: a novel family of PHD zinc finger- and bromodomain-interacting proteins that regulate the transcriptional activity of E2F-1/DP-1.* EMBO J. 20 (9), 2273-2285 (2001)

## **Applications**

1. May be used for in vitro TRIP-Br2 mediated gene transcription regulation study for neuronal cell sleep cycle pathway and cancer cell's lipolysis, thermogenesis regulation with "ProFectin" reagent based intracellular delivery of this protein.
2. May be used as specific protein substrate for kinase and ubiquitin (Sumo pathway) related enzyme functional screening assays.
3. May be used for TRIP-Br2 protein-protein interaction mapping.
4. Potential diagnostic biomarker protein, which could be used for monitoring various cancer cell progression.
5. As immunogen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

MASMTGGQQMGRGHHHHHHENLYFQGGEFLGKGGKRKFDEHEDGLEGKIVSPCDGPSKVSYYTLQ  
RQTI FNI SLMKLYNHRPLTEPSLQKTVLINMLRRIQEELKQEGSLRPMFT PSSQPTTEPSDSY  
REAPPAF SHLASPSSHPCDLGSTTPLEACLT PASLLEDDDDTFCTSQAMQPTAPT KLSPPALLP  
EKDSFSSALDEIEELCPTSTSTEATAATDSVKGTSSEAGTQKLDGPQESRADD SKLMDSLPGN  
FEITTSTGFLTDLTLDDILFADIDTSMYDFD PCTSSSGT ASKMAPVSADDLLKTLAPYSSQPVT  
PSQPFKMDLTELDHIMEVLVGS