



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

## - PRODUCT DATA SHEET -

**Name of Product:** Recombinant Human FBXO2 Protein  
**Catalog Number:** hRP-1919  
**Manufacturer:** LD Biopharma, Inc.

### Introduction

Human FBXO2 gene encodes a member of the F-box protein family which is characterized by an approximately 40 amino acid motif, the F-box. The F-box proteins constitute one of the four subunits of the ubiquitin protein ligase complex called SCFs (SKP1-cullin-F-box), which function in phosphorylation-dependent ubiquitination. It is involved in the endoplasmic reticulum-associated degradation pathway (ERAD) for misfolded luminal proteins by recognizing and binding sugar chains on unfolded glycoproteins that are retro-translocated into the cytosol and promoting their ubiquitination and subsequent degradation. FBXO2 prevents formation of cytosolic aggregates of unfolded glycoproteins that have been retrotranslocated into the cytosol. It also able to recognize and bind denatured glycoproteins, preferentially those of the high-mannose type.

Full-length human FBXO2 cDNA (295 aa) was constructed with codon optimization gene synthesis technology and expressed with N-terminal T7-His-TEV cleavage site Tag (29aa) fusion. This protein 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:** FBXO2 (FBG1; Fbs1; FBX1; NFB42; OCP1)  
**Accession Number:** NP\_036300  
**Species:** Human  
**Size:** 50 µg / Vial  
**Composition:** 0.5 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



**LD Biopharma, Inc.**  
7384 Trade Street, Suite B  
San Diego, CA 92121  
Tel: 858-876-8266  
<http://www.ldbiopharma.com>

Atkin G, et al., F-box only protein 2 (Fbxo2) regulates amyloid precursor protein levels and processing. *JBC*. Mar 7; 289(10): 7038-48. (2014)

Wen H, et al., FBG1 is a promiscuous ubiquitin ligase that sequesters APC2 and causes S-phase arrest  
*Cell Cycle* 9 (22), 4506-4517 (2010)

Eom CY et al., Replication-initiator protein (UL9) of the herpes simplex virus 1 binds NFB42 and is degraded via the ubiquitin-proteasome pathway. *Proc. Natl. Acad. Sci. U.S.A.* 100 (17), 9803-9807 (2003)

Yoshida Y, et al., E3 ubiquitin ligase that recognizes sugar chains. *Nature* 418 (6896), 438-442 (2002)

## **Applications**

1. May be used for in vitro FBXO2 mediated ubiquitin protein ligase complex ( SKP1-cullin-F-box ) pathway regulation study by intracellular delivery of this protein with protein-delivery reagent such as ProFectin Reagent Kit.
2. May be used for protein-protein interaction assay.
3. Potential diagnostic protein for monitoring neuronal diseases such as amyloid protein aggregates
4. As immunogen for specific antibody production.

## **Quality Control**

Purity: > 90% by SDS-PAGE.

## **Recombinant Protein Sequence**

```
MASMTGGQQMGRGHHHHHENLYFQGGFDFDGDGPESVGPQPEEASPEEQPEEASAEERPEDQQ  
EEEEAAAAAYLDELPEPLLLRVLAALPAAELVQACRLVCLRWKELVDGAPLWLLKCQQEGLVPE  
GGVEEERDHWQQFYFLSKRRRNLLRNPCGEEDLEGWCDVEHGGDGRVVEELPGDSGVEFTHDES  
VKKYFASSFEWCRKAQVIDLQAEGYWEELLDTTQPAIVKDWYSGRSDAGCLYELTVKLLSEHE  
NVLAEFSSGQVAVPQDSGGGWMEISHTFTDYGPGVRFVRFEGGGQDSVYWKGFARVTNSSV  
WVEP
```