Datasheet for ABIN7553897

# FBXL5 Protein (AA 1-691) (His tag)

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## Overview

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| Quantity: | 1 mg |
| Target: | FBXL5 |
| Protein Characteristics: | AA 1-691 |
| Origin: | Human |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This FBXL5 protein is labelled with His tag. |

## Product Details

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| Purpose: | Custom-made recombinant FBXL5 Protein expressed in mammalian cells. |
| Sequence: | MAPFPEEVDV FTAPHWRMKQ LVGLYCDKLS KTNFSNNNDF RALLQSLYAT FKEFKMHEQI ENEYIIGLLQ QRSQTIYNVH SDNKLSEMLS LFEKGLKNVK NEYEQLNYAK QLKERLEAFT RDFLPHMKEE EEVFQPMLME YFTYEELKDI KKKVIAQHCS QKDTAELLRG LSLWNHAEER QKFFKYSVDE KSDKEAEVSE HSTGITHLPP EVMLSIFSYL NPQELCRCSQ VSMKWSQLTK TGSLWKHLYP VHWARGDWYS GPATELDTEP DDEWVKNRKD ESRAFHEWDE DADIDESEES AEESIAISIA QMEKRLLHGL IHNVLPYVGT SVKTLVLAYS SAVSSKMVRQ ILELCPNLEH LDLTQTDISD SAFDSWSWLG CCQSLRHLDL SGCEKITDVA LEKISRALGI LTSHQSGFLK TSTSKITSTA WKNKDITMQS TKQYACLHDL TNKGIGEEID NEHPWTKPVS SENFTSPYVW MLDAEDLADI EDTVEWRHRN VESLCVMETA SNFSCSTSGC FSKDIVGLRT SVCWQQHCAS PAFAYCGHSF CCTGTALRTM SSLPESSAMC RKAARTRLPR GKDLIYFGSE KSDQETGRVL LFLSLSGCYQ ITDHGLRVLT LGGGLPYLEH LNLSGCLTIT GAGLQDLVSA CPSLNDEYFY YCDNINGPHA DTASGCQNLQ CGFRACCRSG E **Sequence without tag. The proposed** |

## Product Details

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| | **Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.** |
| Specificity: | If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer. |
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalian cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.<br><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><br>The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified. |
| Purity: | > 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC) |
| Grade: | custom-made |

## Target Details

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| Target: | FBXL5 |
| Alternative Name: | FBXL5 (FBXL5 Products) |
| Background: | F-box/LRR-repeat protein 5 (F-box and leucine-rich repeat protein 5) (F-box protein FBL4/FBL5) (p45SKP2-like protein),FUNCTION: Component of some SCF (SKP1-cullin-F-box) protein ligase complex that plays a central role in iron homeostasis by promoting the ubiquitination and subsequent degradation of IREB2/IRP2 (PubMed:19762596, PubMed:19762597). The C-terminal domain of FBXL5 contains a redox-sensitive [2Fe-2S] cluster that, upon oxidation, promotes binding to IRP2 to effect its oxygen-dependent degradation (PubMed:32126207). Under iron deficiency conditions, the N-terminal hemerythrin-like (Hr) region, which contains a diiron metal center, cannot bind iron and undergoes conformational changes that destabilize |

## Target Details

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| | the FBXL5 protein and cause its ubiquitination and degradation (PubMed:19762596, PubMed:19762597). When intracellular iron levels start rising, the Hr region is stabilized (PubMed:19762596, PubMed:19762597). Additional increases in iron levels facilitate the assembly and incorporation of a redox active [2Fe-2S] cluster in the C-terminal domain (PubMed:32126207). Only when oxygen level is high enough to maintain the cluster in its oxidized state can FBXL5 recruit IRP2 as a substrate for polyubiquination and degradation (PubMed:32126207). Promotes ubiquitination and subsequent degradation of the dynactin complex component DCTN1 (PubMed:17532294). Within the nucleus, promotes the ubiquitination of SNAI1, preventing its interaction with DNA and promoting its degradation (PubMed:24157836). Negatively regulates DNA damage response by mediating the ubiquitin-proteasome degradation of the DNA repair protein NABP2 (PubMed:25249620). {ECO:0000269\|PubMed:17532294, ECO:0000269\|PubMed:19762596, ECO:0000269\|PubMed:19762597, ECO:0000269\|PubMed:32126207}. |
| Molecular Weight: | 78.6 kDa |
| UniProt: | Q9UKA1 |
| Pathways: | Transition Metal Ion Homeostasis |

## Application Details

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| Application Notes: | We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though. |
| Restrictions: | For Research Use only |

## Handling

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| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |