

APJ890Mu01 100µg
Active F-Box And WD Repeat Domain Containing Protein 7 (FBXW7)
Organism Species: *Mus musculus (Mouse)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Cys312~His545

Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose .

Original Concentration: 200µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 7.3

Predicted Molecular Mass: 29.5kDa

Accurate Molecular Mass: 29kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.

Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

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CGNRIVSGS DDNTLKVWSA VTGKCLRTLVT GHTGGVWSSQ
MRDNIISGS TDRTLKVVNA ETGECIHTLY GHTSTVRCMH LHEKRVVSGS
RDATLRVWDI ETGQCLHVLV GHVAAVRCVQ YDGRRVVSGA YDFMVKVWDP
ETETCLHTLQ GHTNRVYSLQ FDGIHVVSQS LDTSIRVWDV ETGNCIHTLT
GHQSLTSGME LKDNILVSGN ADSTVKIWDI KTGQCLQTLQ GPSKH
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[ACTIVITY]

F-Box And WD Repeat Domain Containing Protein 7 (FBXW7), also known as FBW7 or CDC4, serves as a crucial component of the SCF E3 ubiquitin ligase complex. This tumor suppressor protein plays a pivotal role in maintaining cellular homeostasis by targeting several key oncoproteins for degradation. Through its ubiquitin ligase activity, FBXW7 regulates the stability of critical cell cycle regulators and signaling molecules including c-Myc, Cyclin E, Notch, and mTOR. The protein exists in three distinct isoforms that differ in their subcellular distribution and functional specialization. In human cancers, FBXW7 ranks among the most frequently mutated genes, with its inactivation observed across diverse malignancies such as colorectal carcinoma, T-cell acute lymphoblastic leukemia, and breast cancer. Besides, Ring Box Protein 1 (RBX1) has been identified as an interactor of FBXW7, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant mouse FBXW7 and recombinant human RBX1. Briefly, biotin-linked FBXW7 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to RBX1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated

15-25 minutes at 37 °C . Finally, add 50µl stop solution to the wells and read at 450nm immediately. The binding activity of recombinant mouse FBXW7 and recombinant human RBX1 was shown in Figure 1, the EC50 for this effect is 2.20µg/mL.

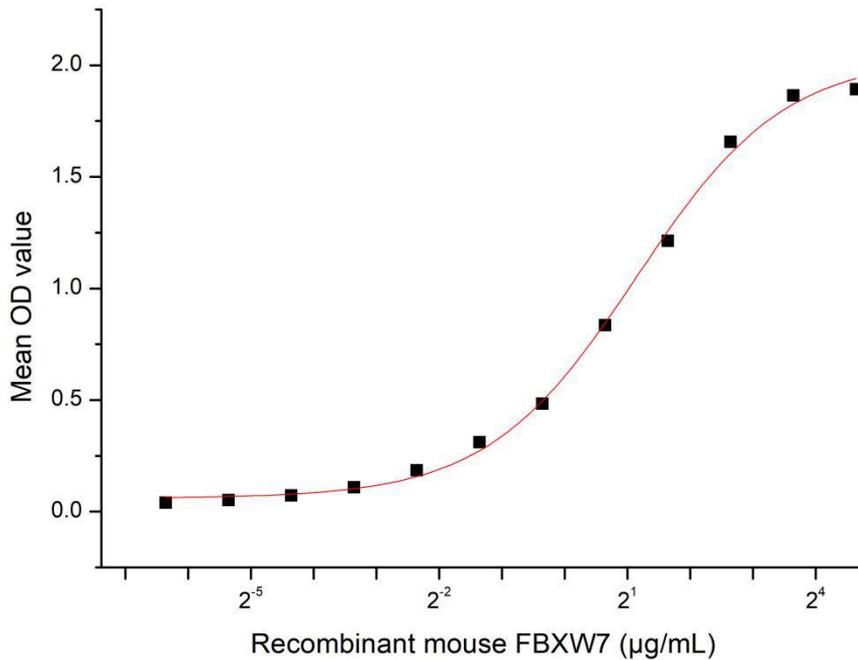


Figure 1. The binding activity of recombinant mouse FBXW7 and recombinant human RBX1

[IDENTIFICATION]

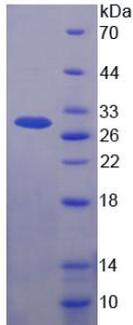


Figure 2. SDS-PAGE

Sample: Active recombinant FBXW7, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.