APC255Hu01 100μg
Active Ubiquitin Specific Peptidase 7 (USP7)
Organism Species: *Homo sapiens* (Human)
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: Glu68~Glu521
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: 5.9
Predicted Molecular Mass: 56.3kDa
Accurate Molecular Mass: 56kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

EATFQFTVERFSRLSESVLSPPCFVRNLPWKIMVMPRFYPDRPHQKSVGFFLQCNAESDSTS
WSCHAQAVLKIINYRDDEKSFSRRISHLFFHKENDWGFSNFMAWSEVTDPEKGFIDDDKVTF
EVFVQADAPHGVAWDSKKHTGYVGLKNQGATCYMNSLLQTLFFTNQLRKAVYMMPTEGD
DSSKSVPLALQRVFYELQHSDKPVGTKKLTKSFGWETLDSFMQHDVQELCRVLLDNVENKM
KGTCVEGTIPKLFRGKMVSYIQCKEVDYRSDRREDYYDIQLSIKGKKNIFESFVDYVAVEQLDG
DNKYDAGEHGLQEAEKGVKFLTLPPVLHLQLMRFMYDPQTDQNIKINDRFEFPEQLPLDEF
LQKTDPKDPANYILHAVLVHSGDNHGGHYVVYLNPKGDGKWCKFDDDVVSRCTKEEAIEH
NYGGHDDDLSVRHCTNAYMLVYIRE

[ACTIVITY]

Ubiquitin Specific Peptidase 7 (USP7) is a deubiquitinating enzyme that plays a crucial role in the ubiquitin - proteasome system. It specifically cleaves ubiquitin from target proteins, thereby regulating their stability, localization, and function. USP7 has been shown to interact with numerous proteins involved in various cellular processes, including cell cycle regulation, DNA repair, and apoptosis. By removing ubiquitin tags, USP7 can prevent the degradation of key regulatory proteins, allowing them to continue their functions within the cell. Additionally, USP7 is involved in the regulation of viral infections, as it can deubiquitinate viral proteins and affect their replication and pathogenesis.Furthermore,USP7 can bind and deubiquitinate UBA52, a ubiquitin-ribosomal fusion protein, influencing ribosomal function and protein synthesis. This interaction links USP7 to translational regulation and cellular homeostasis.Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human USP7 and recombinant human UBA52 .Briefly, biotin-linked USP7 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred

to UBA52-coated microtiter wells and incubated for 1h at 37℃. 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℃. Finally, add 50μl stop solution to the wells and read at 450nm immediately. The binding activity of recombinant human USP7 and recombinant human UBA52 was shown in Figure 1, the EC50 for this effect is 0.107ug/mL.

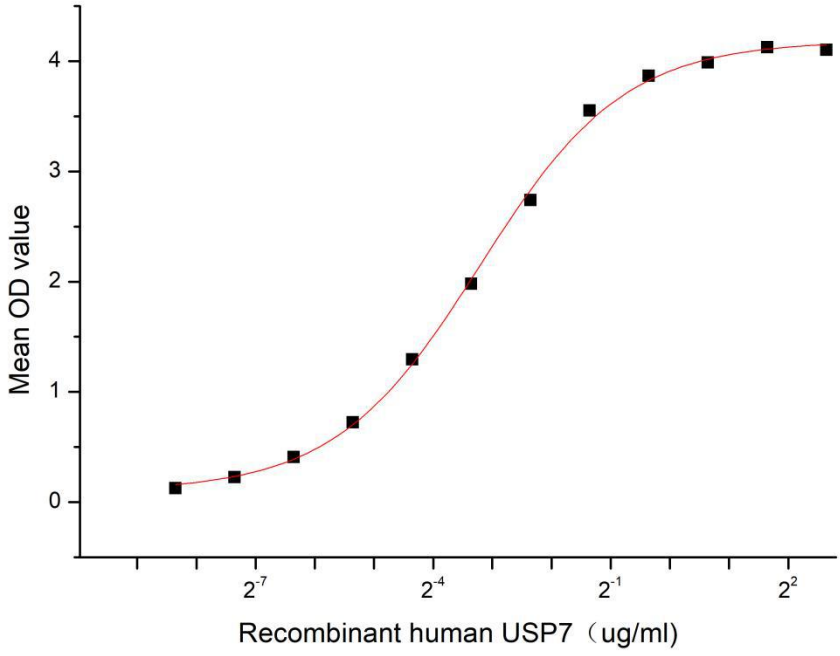

Figure 1. The binding activity of recombinant human USP7 and recombinant human UBA52

[IDENTIFICATION]

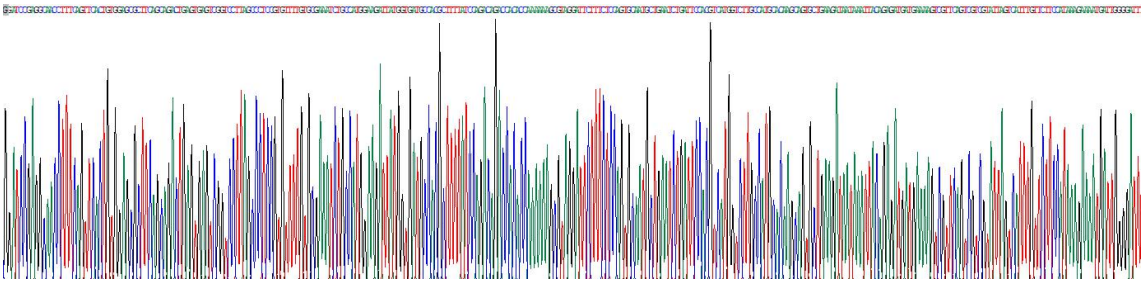

Figure 2. Gene Sequencing (extract)

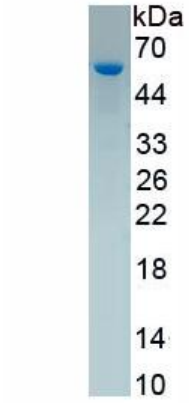

Figure 3. SDS-PAGE

Sample: Active recombinant USP7, Human

[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.