

APL763Hu01 50µg
Active Active Myxovirus Resistance 1 (MX1)
Organism Species: *Homo sapiens* (Human)
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

1st Edition (Apr, 2016)

[PROPERTIES]

Source: Prokaryotic expression.

Host: *E. coli*

Residues: Ser80~Leu342

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: 20mM Tris, 150mM NaCl, pH8.0, containing 0.05% sarcosyl and 5% trehalose.

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 5.8

Predicted Molecular Mass: 30.3kDa

Accurate Molecular Mass: 34kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[USAGE]

Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) 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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S  SGKSSVLEAL  SGVALPRGSG
IVTRCPLVLK  LKKLVNEDKW  RGKVSYQDYE  IEISDASEVE  KEINKAQNAI
AGEGMGISHE  LITLEISSRD  VPDLTLLIDLP  GITRVAVGNQ  PADIGYKIKT
LIKKYIQRQE  TISLVVPSN  VDIATTEALS  MAQEVDPEDG  RTIGILTKPD
LVDKGTEDKV  VDVVRNLVFH  LKKGYMIVKC  RGQQEIQDQL  SLSEALQREK
IFFENHPYFR  DLLEEGKATV  PCLAEKLTS  LITHICKSLP  LL
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[ACTIVITY]

Interferon-induced GTP-binding protein Mx1 is a protein that in humans is encoded by the MX1 gene. In mouse, the interferon-inducible Mx protein is responsible for a specific antiviral state against influenza virus infection. The protein encoded by this gene is similar to the mouse protein as determined by its antigenic relatedness, induction conditions, physicochemical properties, and amino acid analysis. This cytoplasmic protein is a member of both the dynamin family and the family of large GTPases. Besides, Tubulin Beta (TUBb) has been identified as an interactor of MX1, thus a binding ELISA assay was conducted to

detect the interaction of recombinant human MX1 and recombinant human TUBb. Briefly, MX1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100µL were then transferred to TUBb-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-MX1 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 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 MX1 and TUBb was shown in Figure 1, and this effect was in a dose dependent manner.

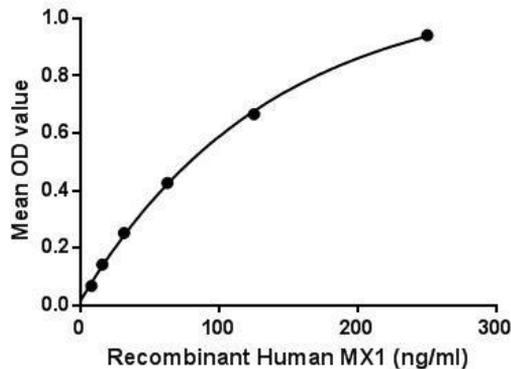


Figure 1. The binding activity of MX1 with TUBb.

[IDENTIFICATION]



Figure 2. Gene Sequencing (extract)

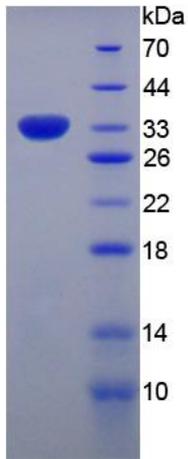


Figure 3. SDS-PAGE

Sample: Active recombinant MX1, Human

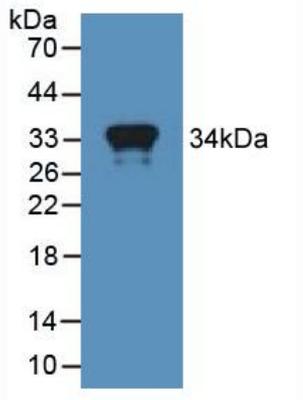


Figure 4. Western Blot

Sample: Recombinant MX1, Human;

Antibody: Rabbit Anti-Human MX1 Ab (PAL763Hu01)

[IMPORTANT NOTE]

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