

**APA691Mu61 100µg**

**Active Kallikrein 6 (KLK6)**

**Organism Species: *Mus musculus (Mouse)***

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Glu24~Leu253

**Tags:** N-terminal His-tag

**Purity:** >90%

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

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

**Original Concentration:** 200µg/mL

**Applications:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 7.4

**Predicted Molecular Mass:** 27.4kDa

**Accurate Molecular Mass:** 30kDa 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

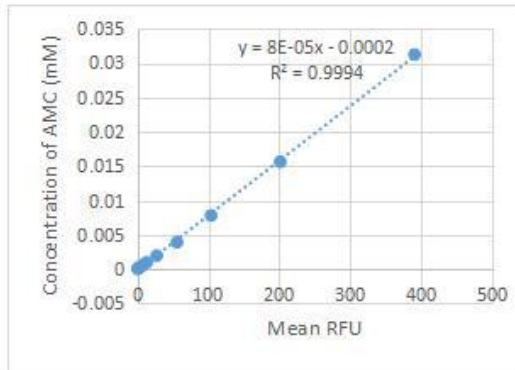
protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **[ SEQUENCE ]**

```
EEQEKVVHGGPCLKDSHPFQAALYTSGLLCGGVLIDPQWVLTAAHCKKPNLQVILGKHNLRQTETFRQISVDRTIVHPRYNPETHD  
NDIMMVHLKNPVKFSKKIQPLPLKNDCEENPNCQILGWGKMENGDFPDTIQCADVHLVPREQCERAYPGKITQSMVCGADMKEGND  
CQGDGGPLVCGGRLRGLVSWGDMPCGSKKPGVYTDVCTHIRWIQNILRNKWL
```

## **[ ACTIVITY ]**

Tissue kallikreins are a family of extracellular serine proteases consisting of 15 members. Tissue kallikreins have attracted great interest as potential biomarkers for various cancers, including prostate, ovarian, breast, testicular, and lung. Human Kallikrein 6 (hKLK6) is a member of tissue kallikrein family observed in breast and brain tissues, colon carcinoma cells, and oligodendrocytes. Known protein substrates of hKLK6 are myelin basic protein, the precursor of the A beta amyloid peptide, and plasminogen. Its physiological functions may include the participation in demyelination processes as well as in the progression of inflammatory disease of the CNS. The activity assay of recombinant mouse KLK6 was measured by its ability to cleave the fluorogenic peptide substrate Boc-QAR-AMC. The rmKLK6 was activated by Lysyl-endopeptidase in the activation buffer 50 mM Tris, 0.05% (w/v) Brij-35, pH 8.0, of which equal volumes of 200 ug/ml rmKLK6 and 2.5 mU/ml Lysyl-endopeptidase were combined and incubated at room temperature for 30 minutes. The activated rmKLK6 was diluted to 3 ug/ml in assay buffer and start the reaction by adding 50 µL of 200 µM substrate. Read at excitation and emission wavelengths of 380 nm and 460 nm (top read), respectively, in kinetic mode for 5 minutes. The specific activity of recombinant mouse KLK6 is >6000 pmol/min/µg.



**Figure 1. The standard curve of AMC**

RFU	AMC (mM)
390.1509	0.03125
201.1509	0.015625
103.9509	0.0078125
56.0009	0.00390625
27.4709	0.001953125
13.1709	0.000976563
6.5189	0.000488281
3.0259	0.000244141
1.4129	0.00012207
0.7129	6.10352E-05

One unit of enzyme activity is defined as the 1  $\mu$ g of enzyme required to convert 1 pmol of Boc-QAR-AMC to AMC in 1min.

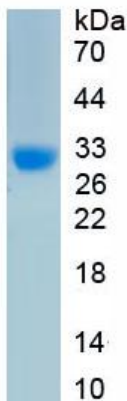
$$\text{Specific Activity (pmol/min/}\mu\text{g)} = \frac{\Delta OD * F}{T * N}$$

$\Delta$ OD=Adjusted for Substrate Blank

F=Conversion Factor (convert from standard curve of AMC)

T= Time

## [ IDENTIFICATION ]



**Figure 2. SDS-PAGE**

**Sample: Active recombinant KLK6, 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.