

APD392Hu01 100µg
Active Kallistatin (KAL)

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: Gln21~Pro427

Tags: N-terminal His-tag

Purity: >80%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 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: 8.1

Predicted Molecular Mass: 50.1kDa

Accurate Molecular Mass: 50kDa 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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QLHVEHDGEGSCSNSSHQQILETGEGSPSLKIAPANADFAFRFYLIASETPGKNIFFSPL
SISAAYAMLSLGACSHSRSQILEGLGFNLTELSESDVHRGFQHLLHTLNLPGHGLETRVG
SALFLSHNLKFLAKFLNDTMAVYEAKLFHTNFYDTVGTIQLINDHVKKETRGKIVDLVSE
LKKDVLMLVNVNIYFKALWEKPFISSRTTPKDFYVDENTTVRVPMMLQDQEHHWYLDHRY
LPCSVLRMDYKGDATVFFILPNQGKMREIEEVLTPPEMLMRWNNLLRKRNFYKKLELHLPK
FSISGSYVLDQILPRLGFTDLFSKWADLSGITKQOKLEASKSFHKATLDVDEAGTEAAAA
TSFAIKFFSAQTNRHILRFNRPFLLVWIFSTSTQSVLFLGKVVDPKTP
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[ACTIVITY]

Kallistatin (KAL), a member of serpin family, can inhibit human amidolytic and kininogenase activities of tissue kallikrein. KAL is widely distributed in a variety of organs and body fluids and has biological effects such as anti-inflammatory, antioxidant stress, anti-angiogenesis and anti-tumor. Besides, Kallikrein 2 (KLK2) has been identified as an interactor of KAL, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human KAL and recombinant human KLK2. Briefly, KLK2 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to KAL-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-KLK2 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37 °C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 μ L stop solution to the wells and read at 450/630 nm immediately. When recombinant human KAL is immobilized at 2 μ g/mL (100 μ L/well), the concentration of KLK2 that produces 50% optimal

binding response is found to be approximately 0.49 ug/mL.

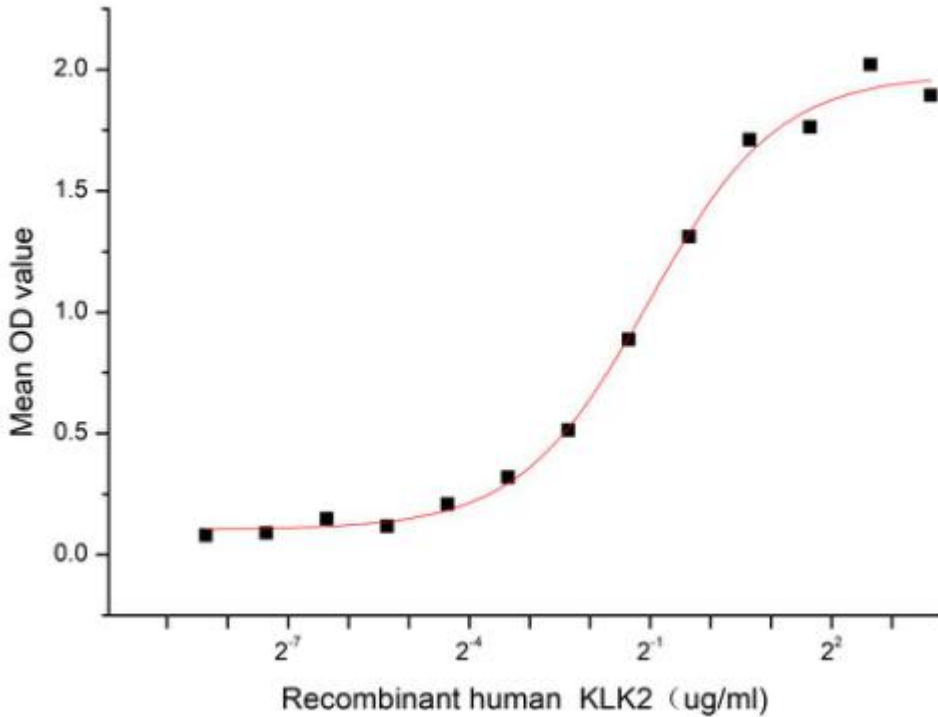


Figure 1. The binding activity of recombinant human KAL and recombinant human KLK2

[IDENTIFICATION]

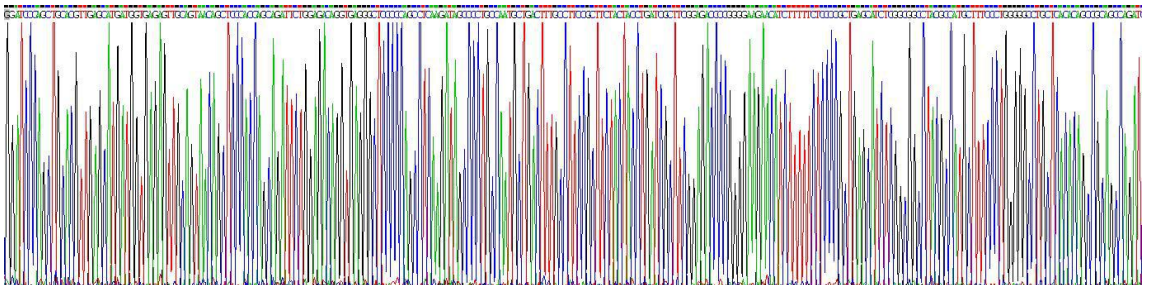


Figure 2. Gene Sequencing (extract)

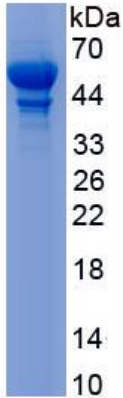


Figure 3. SDS-PAGE

Sample: Active recombinant KAL, 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.