

APH061Hu01 100µg
Active TANK Binding Kinase 1 (TBK1)
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: Trp9~Val310

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: 37.9kDa

Accurate Molecular Mass: 38kDa 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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WL LSDILGQGAT ANVFRGRHKK TGD LFAIKVF NNISFLRPVD
VQMREFEV LK KLNHNKIVKL FAIEEETTTR HKVLIMEFCP CGSLYTVLEE
PSNAYGLPES EFLIVLRD VV GGMNHLRENG IVHRDIKPGN IMRVIGEDGQ
SVYKLTDFGA ARELEDDEQF VSLYGTEEYL HPDMYERAVL RKDHQKKYGA
TVDLWSIGVT FYHAATGSLP FRPFEGPRRN KEV MYKIITG KPSGAISGVQ
KAENGPIDWS GDMPVSCSL S RGLQVLLTPV LANILEADQE KCWGF DQFFA
ETSDILHRMV
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[ACTIVITY]

TANK Binding Kinase 1 (TBK1) is a serine/threonine kinase involved in innate immune signaling, particularly in regulating interferon (IFN) production and autophagy. It phosphorylates and activates transcription factors like IRF3/IRF7 to drive antiviral responses. TBK1 also interacts with signaling adaptors (e.g., TANK, TRIF) and is linked to inflammation and neurodegenerative diseases. Dysregulation of TBK1 has been associated with cancer and autoimmune disorders. Besides, FGFR1 has been identified as an interactor of TBK1, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TBK1 and recombinant human FGFR1. Briefly, TBK1 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to FGFR1-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-TBK1 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 450/630nm immediately. The

binding activity of recombinant human TBK1 and recombinant human FGFR1 was shown in Figure 1, the EC50 for this effect is 1.11/mL.

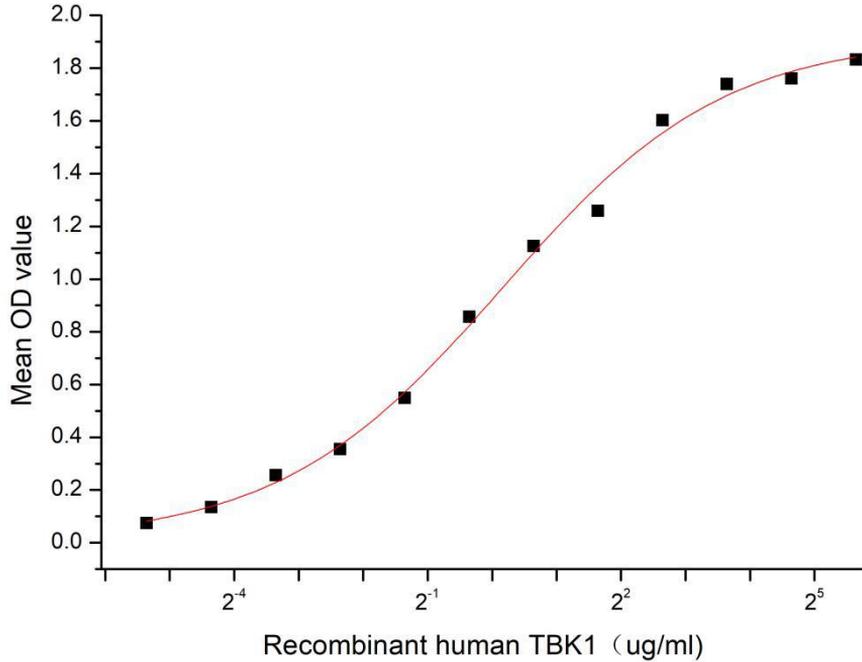


Figure 1. The binding activity of recombinant human TBK1 and human FGFR1

[IDENTIFICATION]

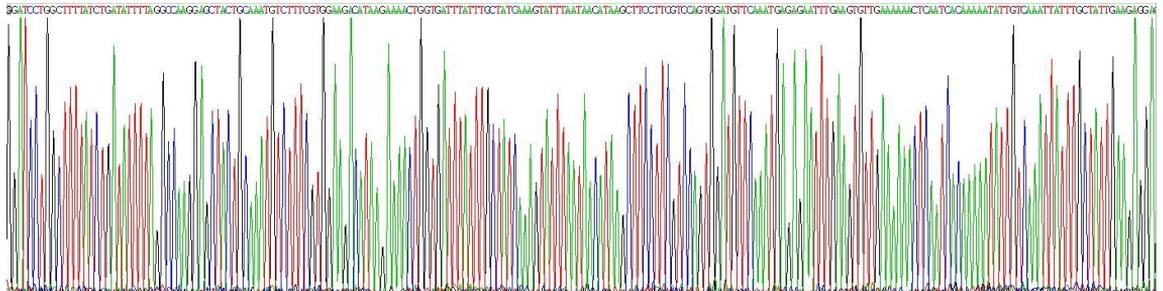


Figure 2. Gene Sequencing (extract)

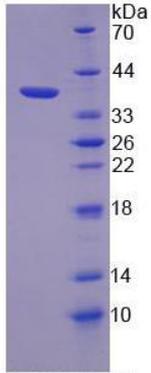


Figure 3. SDS-PAGE

Sample: Active recombinant TBK1, 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.