

APE711Hu01 100µg
Active Tubulin Beta 3 (TUBb3)
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: Tyr222~Glu438

Tags: N-terminal His and GST 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: 6.1

Predicted Molecular Mass: 54.7kDa

Accurate Molecular Mass: 54kDa 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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YGDLNHLVS ATMSGVTTSL RFPGQLNADL
RKLAVNMVVF PRLHFFMPGF APLTARGSQQ YRALTVPILT QQMFDAKMMM
AACDPRHGRY LTVATVFRGR MSMKEVDEQM LAIQSKNSSY FVEWIPNNVK
VAVCDIPPRG LKMSSTFIGN STAIQELFKR ISEQFTAMFR RKAFLHWYTG
EGMDEMEFTE AESNMNDLVS EYQQYQDATA EEGEMYE
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[ACTIVITY]

Tubulin Beta 3 (TUBb3) is a primarily neuron-expressed β -tubulin isotype critical for microtubule dynamics, axonal guidance, and neurodevelopment. As a key cytoskeletal component, it maintains neuronal structural integrity and intracellular transport, serving as a differentiation marker. Aberrant TUBB3 expression correlates with neurological disorders and chemoresistance. Its interaction with kallikrein-related peptidase 5 (KLK5) may modulate KLK5's proteolytic activity in pathological contexts such as tumor metastasis or neural plasticity. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human TUBb3 and recombinant mouse KLK5. Briefly, TUBb3 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to KLK5-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-TUBb3 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 TUBb3 and recombinant mouse KLK5 was shown in Figure 1, the EC50 for this effect is 0.03ug/mL.

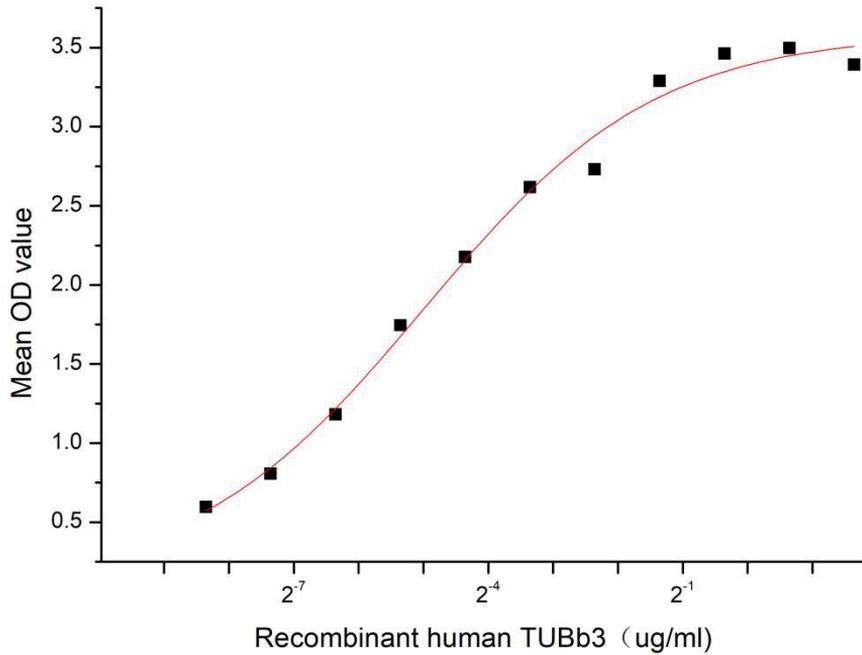


Figure 1. The binding activity of recombinant human TUBb3 and recombinant mouse KLK5

[IDENTIFICATION]



Figure 2. Gene Sequencing (extract)

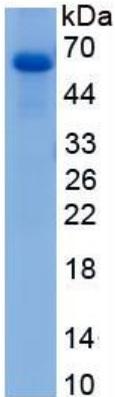


Figure 3. SDS-PAGE

Sample: Active recombinant TUBb3, 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.