

APB870Hu01 2mg
Active Tubulin Beta (TUBb)
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: Val170~Val419

Tags: N-terminal His-tag

Purity: >95%

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

Buffer Formulation: PBS, pH7.4, containing 0.01% SKL, 5% Trehalose.

Original Concentration: 400µg/mL

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 6.6

Predicted Molecular Mass: 32.1kDa

Accurate Molecular Mass: 32kDa 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]

```
V PSPKVS DTVV EPYNATLSVH QLVENTDETY
CIDNEALYDI CFRTLKLTTP TYGDLNHLVS ATMSGVTTCL RFPGQLNADL
RKLAVNMVFP PRLHFFMPGF APLTSRGSQQ YRALTVP ELT QQVFDKNNMM
AACDPRHGRY LTVAAVFRGR MSMKEVDEQM LNVQNKSSY FVEWIPNNVK
TAVCDIPPRG LKMAVTFIGN STAIQELFKR ISEQFTAMFR RKAFLHWYTG
EGMDEMEFTE AESNMNDLV
```

[ACTIVITY]

Tubulin is the major constituent of microtubules, a cylinder consisting of laterally associated linear protofilaments composed of alpha- and beta-tubulin heterodimers. Tubulin Beta (TUBb) is a spherical molecule which is composed of 455 amino acids. Tyrosine 3/Tryptophan 5 Monooxygenase Activation Protein Zeta (YWHAz) has a remarkably high affinity for TUBb, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TUBb and recombinant human YWHAz. Briefly, TUBb was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µl were then transferred to YWHAz-coated microtiter wells and incubated for 1h at 37°C. Wells were washed with PBST and incubated for 1h with anti-TUBb 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 µL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human TUBb and recombinant human YWHAz was shown in Figure 1, the EC50 for this effect is 0.88 ug/mL.

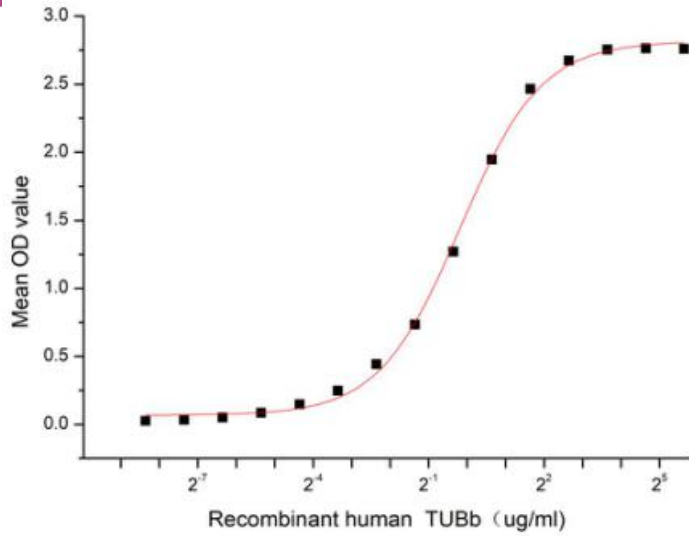


Figure 1. The binding activity of recombinant human TUBb and recombinant human YWHAz

[IDENTIFICATION]

YFSPKVS DTVVEPYNASISVHQLVENTDETYCIDNEALVDICFRTLKLTPTVGDLNHLVSA TMSGYTTC LRFPGQLNADLRKLA VHHVFPRLHF

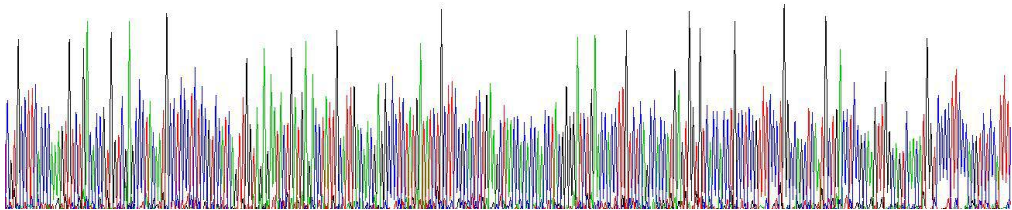


Figure 2. Gene Sequencing (extract)

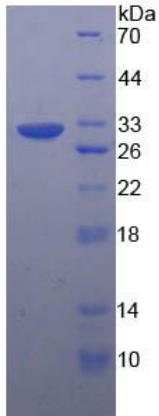


Figure 3. SDS-PAGE

Sample: Active recombinant TUBb, 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.