APA153Hu01 100μg
Active Alpha-Fetoprotein (AFP)
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: Ile31~Pro171
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% SKL, 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: 5.2
Predicted Molecular Mass: 17.3kDa
Accurate Molecular Mass: 18kDa 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 2-8ºC for one month.
Aliquot and store at -80ºC 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 37ºC 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]

ILDSYQCTAE ISLADLATIF
FAQFVQEATY KEVSKMVKDA LTAIEKPTGD EQSSGCLENQ LPAFLEELCH
EKEILEKYGH SDCCSQSEEG RHNCFLAHKK PTPASIPLFQ VPEPVTSCEA
YEEDRETFMN KFIYEIARRH P

[ACTIVITY]

Alpha-Fetoprotein (AFP), as known as fetal alpha globulin or alpha-1-fetoprotein, is a glycoprotein belonging to the albumin family that is produced mainly by the fetal liver and yolk sac during pregnancy. Its primary function in the fetus is to transport calcium and fatty acids across the placenta, supporting fetal growth and development. In adults, elevated AFP levels can indicate certain medical conditions, including liver cancer and other diseases. Besides, Coagulation Factor II (F2) has been identified as an interactor of AFP, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human AFP and recombinant human F2. Briefly, AFP was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to F2-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-AFP pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630 nm immediately. The binding activity of recombinant human AFP and recombinant human F2 was shown in Figure 1, the EC50 for this effect is 1.06 ug/mL.

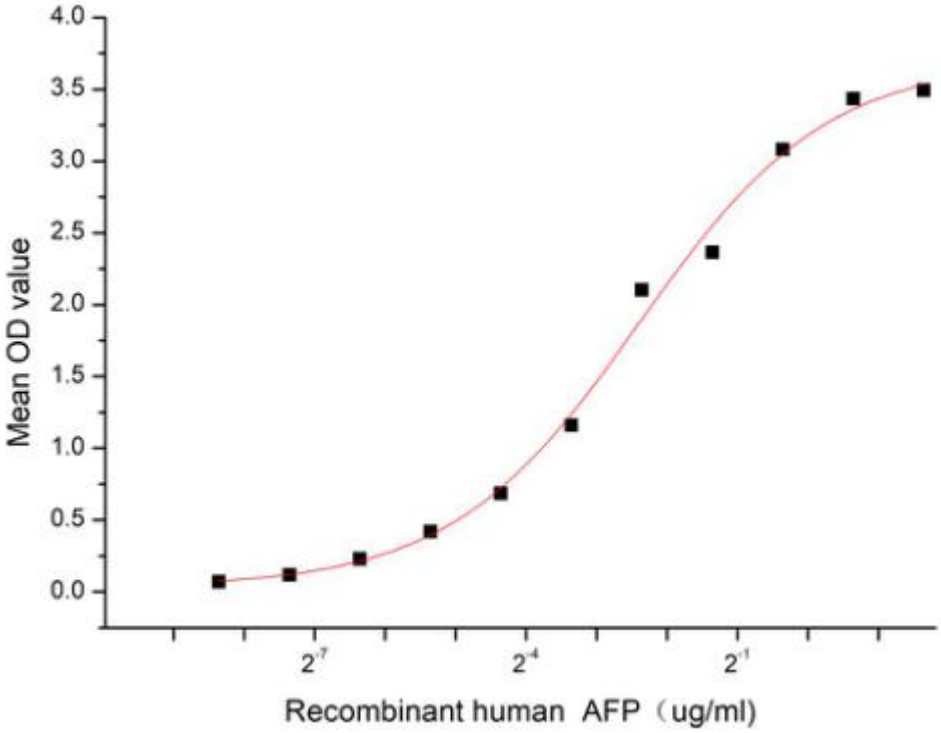

Figure 1. The binding activity of recombinant human AFP and recombinant human F2

[IDENTIFICATION]

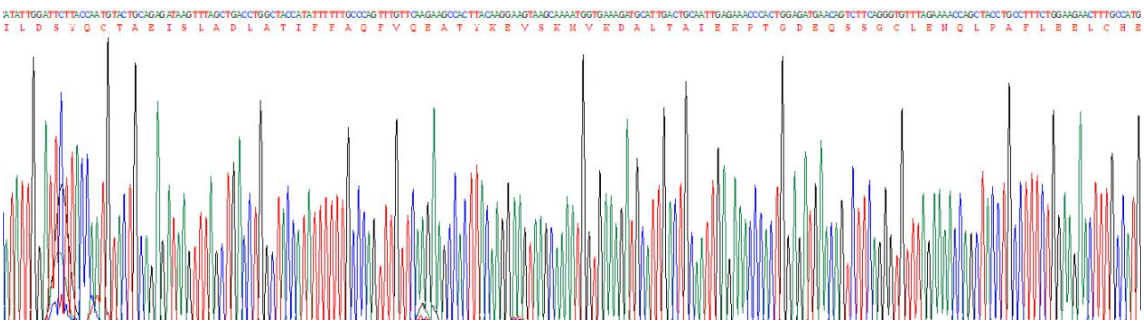

Figure 2. Gene Sequencing (extract)

Figure 3. SDS-PAGE

Sample: Active recombinant AFP, 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.