

APA153Hu02 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~Ser576

Tags: Two N-terminal Tags, His-tag and SUMO-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: 5.5

Predicted Molecular Mass: 75.2kDa

Accurate Molecular Mass: 75kDa 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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ILDSYQCTAE ISLADLATIF
FAQFVQEATY KEVSKMVKDA LTAIEKPTGD EQSSGCLENQ LPAFLEELCH
EKEILEKYGH SDCCSQSEEG RHNCFLAHKK PTPASIPLFQ VPEPVTSCFA
YEEDRETFMN KFIYEIARRH PFLYAPTILL WAARYDKIIP SCCKAENAVE
CFQTKAATVT KELRESSLLN QHACAVMKNF GTRTFQAITV TKLSQKFTKV
NFTEIQKLVV DVAHVHEHCC RGDVLDCLQD GEKIMSYICS QQDTLSNKIT
ECCKLTTLER GQCIIHAEND EKPEGLSPNL NRFLGDRDFN QFSSGKKNIF
LASFVHEYSR RHPQLAVSVI LRVAKGYQEL LEKCFQTENP LECQDKGEEE
LQKYIQESQA LAKRSCGLFQ KLGEYYLQNA FLVAYTKKAP QLTSSSELMAI
TRKMAATAAT CCQLSEDKLL ACGEGAADII IGHLCIRHEM TPVNPVGVCQ
CTSSYANRRP CFSSLVDET YVPPAFSDDK FIFHKDLCQA QGVALQTMKQ
EFLINLVKQK PQITEEQLEA VIADFS
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[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, Serpin A10 (SERPINA10) 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 SERPINA10. Briefly, SERPINA10 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to AFP-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-SERPINA10 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 450/630nm immediately. Measured by its binding ability in a functional ELISA. The binding activity of recombinant human AFP and recombinant human SERPINA10 was shown in Figure 1, and this effect was in a dose dependent manner.

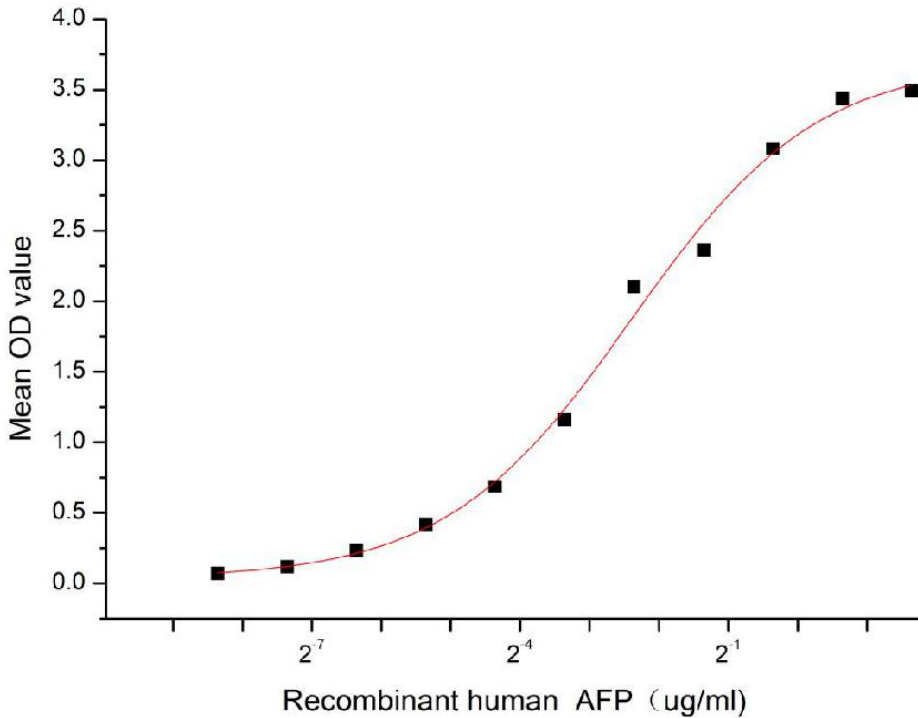


Figure 1. The binding activity of recombinant human AFP and recombinant human SERPINA10

[IDENTIFICATION]

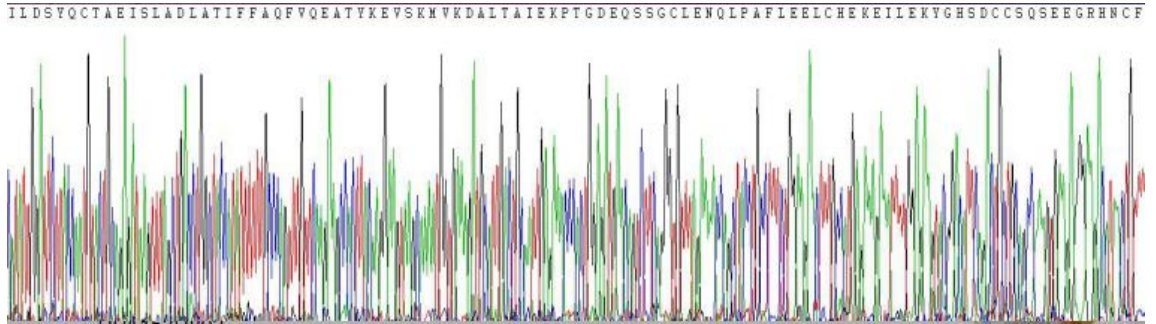


Figure 2. Gene Sequencing (extract)

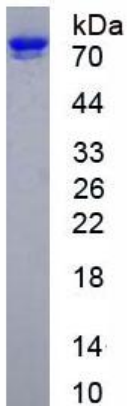


Figure 3. SDS-PAGE

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.