

APA150Hu61 100µg
Active Carcinoembryonic Antigen (CEA)
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: Eukaryotic expression.

Host: 293F cell

Residues: Lys35~Ala685

Tags: N-terminal His-tag

Purity: >95%

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

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

Original Concentration: 350µg/mL

Applications: Cell culture; Activity Assays.

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

Predicted isoelectric point: 5.4

Predicted Molecular Mass: 73.0kDa

Accurate Molecular Mass: 80kDa as determined by SDS-PAGE reducing conditions.

Phenomenon explanation:

The possible reasons that the actual band size differs from the predicted are as follows:

1. Splice variants: Alternative splicing may create different sized proteins from the same gene.
2. Relative charge: The composition of amino acids may affects the charge of the protein.
3. Post-translational modification: Phosphorylation, glycosylation, methylation etc.
4. Post-translation cleavage: Many proteins are synthesized as pro-proteins, and then cleaved to give the active form.
5. Polymerization of the target protein: Dimerization, multimerization etc.

[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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                                                                 KLTIES TPFNVAEGKE
VLLL VHNLPQ HLF GYSWYKG ERVDGNRQII GYVIGTQQAT PGPAYSGREI
IYPNASLLIQ NIIQNDTGFY TLHVIKSDLV NEEATGQFRV YPELKPSPIS
SNNSKPVEDK DAVAFTCEPE TQDATYLWWV NNQSLPVSPR LQLSNGNRTL
TLFNVTRNDT ASYKCETQNP VSARRSDSVI LNVLYGPDAP TISPLNTSYR
SGENLNLSCH AASNPPAQYS WFNVTGFQQS TQELFIPNIT VNNSGSYTCQ
AHNSDTGLNR TTVTTITVYA EPPKPFITSN NSNPVEDEDA VALTCEPEIQ
NTTYLWVWVN QSLPVSPRLQ LSNDNRTLTL LSVTRNDVGP YECGIQNKLS
VDHSDPVILN VLYGPDPTI SPSYTYRPG VNL SLSCHAA SNPPAQYSWL
IDGNIQQHTQ ELFISNITEK NSGLYTCQAN NSASGHSRTT VKTITVSAEL
PKPSSSNNNS KPVEDKDAVA FTCEPEAQNT TYLWVWNGQS LPVSPRLQLS
NGNRTLTLFN VTRNDARAYV CGIQNSVSAN RSDPVTLDVL YGPDTPIISP
PDSSYLSGAN LNLSCHSASN PSPQYSWRIN GIPQHTQVL FIAKITPNNN
GTYACFVSNL ATGRNNSIVK SITVSASGTS PGLSA
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[ACTIVITY]

Carcinoembryonic antigen (CEA), as one of the common tumor markers, is a human glycoprotein involved in cell adhesion and is expressed during human fetal development. Since the birth of human, CEA expression is largely inhibited, with only low levels in the plasma of healthy adults. Generally, CEA will overexpressed in many cancers, including gastric, breast, ovarian, lung, and

pancreatic cancers, especially colorectal cancer. The lectin galactoside-binding soluble 3 binding protein (LGALS3BP) is also a secreted, which was first identified as cancer and metastasis associated protein. LGALS3BP has been identified as an interactor of CEA, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human CEA and recombinant human LGALS3BP. Briefly, biotin-linked CEA were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to LGALS3BP-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 nm immediately. The binding activity of CEA and LGALS3BP was shown in Figure 1, and this effect was in a dose dependent manner.

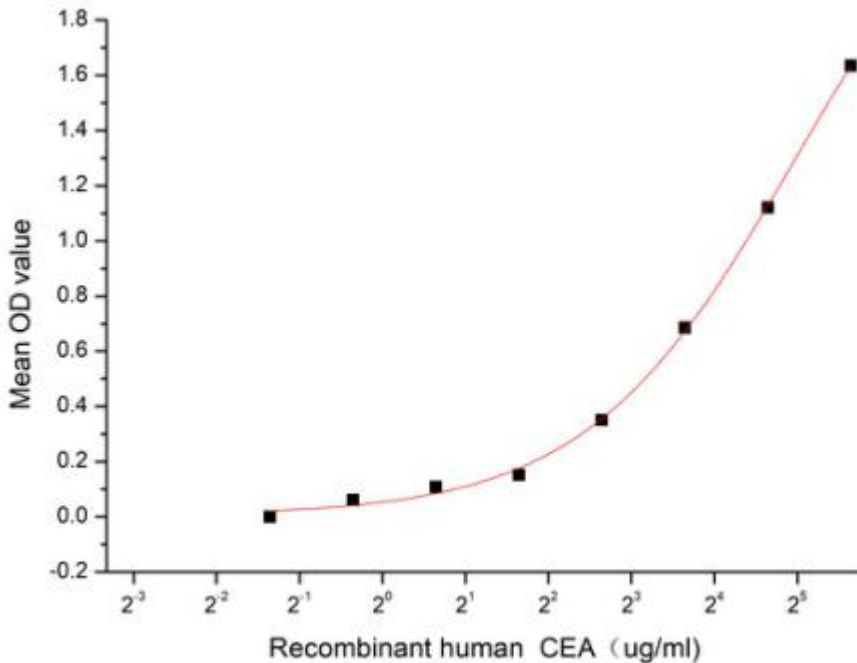


Figure 1. The binding activity of recombinant human CEA and recombinant human LGALS3BP

[IDENTIFICATION]

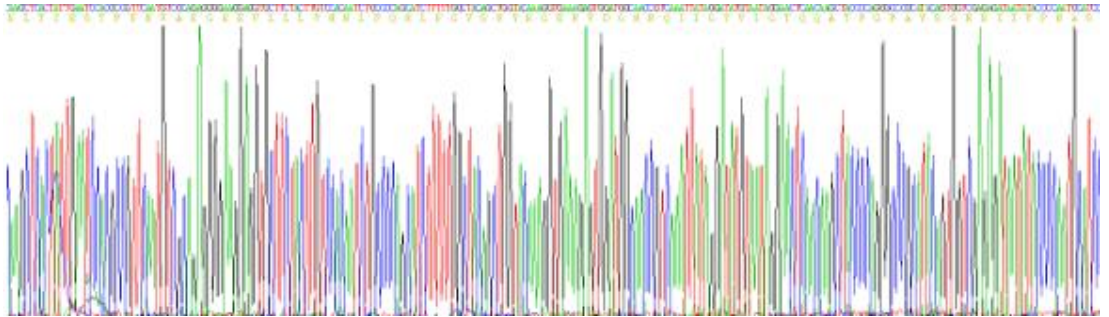


Figure 2. Gene Sequencing (extract)

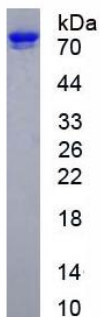


Figure 3. SDS-PAGE

Sample: Active recombinant CEA, 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.