

APB171Hu62 100µg
Active Transferrin Receptor (TFR)
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: Cys89~Phe760

Tags: N-terminal His-tag

Purity: >90%

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

Buffer Formulation: PBS, pH7.4, containing 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: 6.8

Predicted Molecular Mass: 76.8kDa

Accurate Molecular Mass: 80kDa 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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                                                                CK GVEPKTECER
LAGTESPVRE EPGEDFPAAR RLYWDDLKRK LSEKLDSTDF TGTIKLLNEN
SYVPREAGSQ KDENLALYVE NQFREFKLSK VWRDQHFVKI QVKDSAQNSV
IIVDKNGRLV YLVENPGGYV AYSKAATVTG KLVHANFGTK KDFEDLYTPV
NGSIVIVRAG KITFAEKVAN AESLNAIGVL IYMDQTKFPI VNAELSFHGH
AHLGTGDPYT PGFPSFNHTQ FPPSRSSGLP NIPVQTISRA AAEKLFNME
GDCPSDWKTD STCRMVTSSE KNVKLTVSNV LKEIKILNIF GVIKGFVEPD
HYVVVGAQRD AWGPGAAKSG VGTALLLKLQ QMFSDMVLKD GFQPSRSIIF
ASWSAGDFGS VGATEWLEGY LSSLHLKAFY YINLDKAVLG TSNFKVSASP
LLYTLIEKTM QNVKHPVTGQ FLYQDSNWAS KVEKLTLDNA AFPFLAYSGI
PAVSFCFCED TDYPYLGTTM DTYKELIERI PELNKVARAA AEVAGQFVIK
LTHDVELNLD YERYNSQLLS FVRDLNQYRA DIKEMGLSLQ WLYSARGDFF
RATSRLTDF GNAEKTDRFV MKKLNDRVMR VEYHFLSPYV SPKESPFRHV
FWGSGSHTLP ALLENLKLKQ QNNGAFNETL FRNQLALATW TIQGAANALS
GDVWDIDNEF
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[ACTIVITY]

Transferrin Receptor (TFR) , also known as cluster of differentiation 71 (CD71), is a type II transmembrane glycoprotein that plays a crucial role in the transport of iron into the cell. It binds to Transferrin (TRF), a carrier protein that transports iron in the blood, and facilitates the uptake of iron through endocytosis. This process is essential for many biological functions, including DNA synthesis and cell growth. Thus a functional binding ELISA assay was conducted to detect the interaction of recombinant human TFR and recombinant chicken TRF. Briefly, biotin-linked TFR were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to TRF-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 50µl stop solution to the wells and read at 450nm immediately. The binding activity of TFR and TRF was shown in Figure 1, the EC50 for this effect is 0.068ug/mL.

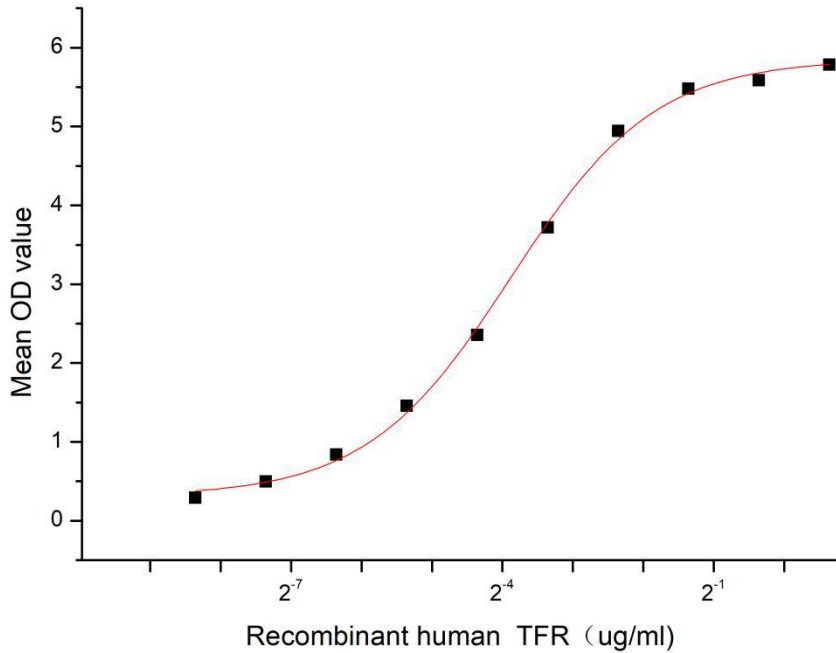


Figure 1. The binding activity of recombinant human TFR and recombinant chicken TRF

[IDENTIFICATION]

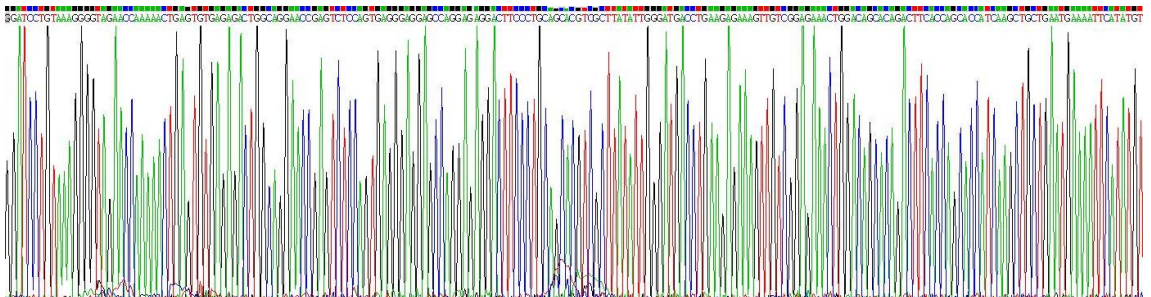


Figure 2. Gene Sequencing (extract)

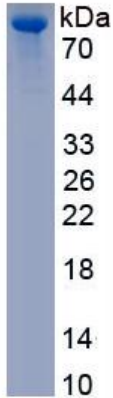


Figure 3. SDS-PAGE

Sample: Active recombinant TFR, 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.