

**APC036Ca61 100µg**

**Active Transferrin (TF)**

**Organism Species: *Canis familiaris*; Canine (Dog)**

***Instruction manual***

FOR RESEARCH USE ONLY

NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

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13th Edition (Revised in Aug, 2023)

## **[ PROPERTIES ]**

**Source:** Eukaryotic expression.

**Host:** 293F cell

**Residues:** Val20~Ser705

**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:** Cell culture; Activity Assays.

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

**Predicted isoelectric point:** 7.4

**Predicted Molecular Mass:** 77.8kDa

**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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VSPEKTVRWCTVSNHEASKCSSFMENMKTVLENGPFVSCVKRTSYLECIKAIWANEADAVTLDAGLVFE
AGLNPNYLNKPVVAEFYGKDKQTRYAVAVVKKSSFTNLNQLQGKKSCHTGLGRSAGWNIPMGLLYWKLP
EPRESLQKAASSFFTASCVPCVDRTAFPKLCQLCVGKGTDKCACSNEHPYFGYSGAFKCLMEDAGEVAF
VKHSTVLENLPNKADLDQYELLCPDNKRKPVGEYKQCYLAKVPSHAVVARSVGGKEDLIWELLNQAQEH
YGKDKSKVFQFLFSSTLGDLLFKDSAEGFFRIPPKMDTWLYLGYEYVTALRNLRDVRPDTPRDECKKV
KWCAVGHEIAKCDWSVNSEGKIECESAESTEDCIAKAKGEADAMSLDGGYIYIAGQCGLVPVLAEN
YKTQGSTCSNTAEEGYLAVAVVKRLDKTISWNNLQGRKSCHTAVDRTAGWNIPMGLLYNRINHCEFDKF
FSQGCAPGSMRNSSLCALCIGSANVPGKECVNNHERYYGYTGAFRCLVEKGDVAFVKDQTVLQNTGGK
NTEDWAKDLKEEDFELLCPDGQRKSVDKAPECFLAKAPNHAVVSRKDKASCVSKMLLDQQLLFGRNGND
CSGKFCFLHSATKDLLFRDDTQCLAKLPEDTTYKSYLGAEYITAVANLRQCSTSKLLEACTFHTS
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## **[ ACTIVITY ]**

Transferrin (TF) is one of members of anion-binding superfamily of proteins. It is synthesized as a 698 amino acid (aa) precursor, which is mainly in the liver and is present in high concentrations in the bloodstream. TF plays a fundamental role in iron metabolism, protecting tissues from the potentially harmful effects of free iron, which can generate reactive oxygen species and cause oxidative damage. To test the effect of TF on cell proliferation, HepG2 cells were seeded into triplicate wells of 96-well plates and allowed to attach, replaced with various concentrations of recombinant dog TF. After incubated for 72h, cells were observed by inverted microscope and cell proliferation was measured by Cell Counting Kit-8 (CCK-8). Briefly, 10  $\mu$ l of CCK-8 solution was added to each well of the plate, then the absorbance at 450 nm was measured using a microplate reader after incubating the plate for 1-4 hours at 37 °C. Cell viability was assessed by CCK-8 assay after incubation with recombinant dog TF for 72h. The result was shown in Figure 1. It was obvious that TF significantly increased cell viability of HepG2 cells. The ED50 of recombinant dog TF is 0.292  $\mu$ g/ml.

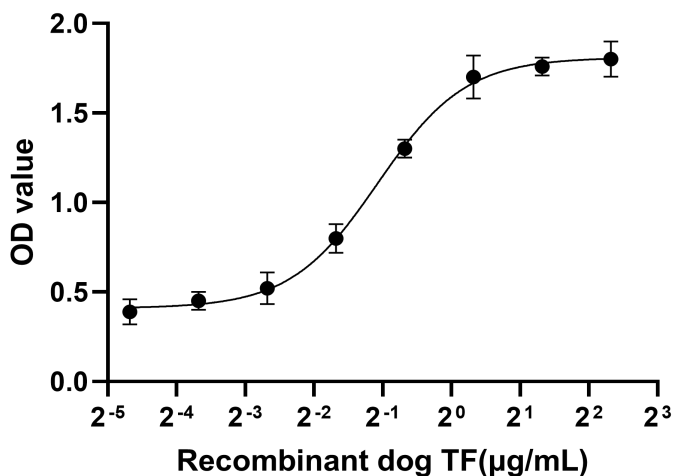


Figure1. The dose-effect curve of recombinant dog TF on HepG2 cells

## [ IDENTIFICATION ]

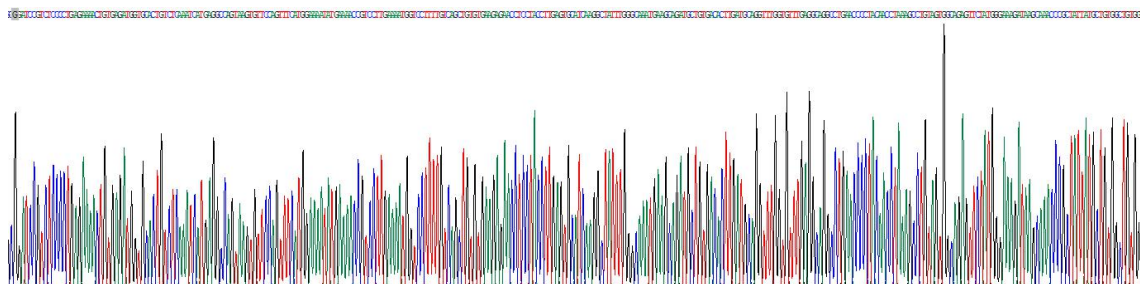


Figure 2. Gene Sequencing (extract)

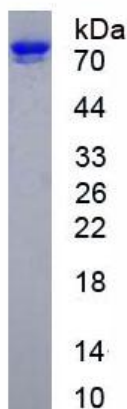


Figure 3. SDS-PAGE

**Sample: Active recombinant TF, Dog**

**[ 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.