APA929Hu62 100μg
Active Retinol Binding Protein 4 (RBP4)
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: Glu19~Leu201
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: 5.4
Predicted Molecular Mass: 22.9kDa
Accurate Molecular Mass: 24kDa 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 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]

ERDCRVSSFRVKENFDKARFSGTWYAMAKKDPERLFLQDNIVAEFSVDETGQMSATAKGRVRLL
NNWDVCADMVGTFTDTEDPAKFKMKYWGVASFLQKGNDDHWIVDTDYDTYAVQYSCRLLNL
DGTCADSYSFVFSRDPNGLPPEAQKIVRQRQEELCLARQYRLIVHNGYCDGRSERNLL

[ACTIVITY]

Retinol Binding Protein 4 (RBP4) is a 21-kDa secreted glycoprotein belonging to the lipocalin family, predominantly synthesized in the liver and adipose tissue. It functions as the primary carrier of retinol (vitamin A) in the bloodstream, facilitating retinol transport to target tissues and regulating systemic vitamin A homeostasis. RBP4 plays critical roles in vision, epithelial cell differentiation, immune function, and metabolic regulation, with dysregulation linked to obesity, type 2 diabetes, and cardiovascular diseases. RBP4 binds to retinoic acid-BSA conjugate, enabling targeted delivery of retinoic acid and enhancing its bioavailability in biological systems.Thus a functional ELISA assay was conducted to detect the interaction of recombinant human RBP4 and recombinant retinoic acid-BSA conjugate. Briefly, RBP4 was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 μl were then transferred to retinoic acid-BSA conjugate-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-RBP4 pAb, then aspihumaned and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspihumaned and washed 5 times. With the addition of substhumane solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human RBP4 and recombinant retinoic acid-BSA conjugate was shown in Figure 1, the EC50 for this effect is 13.88μg/mL.

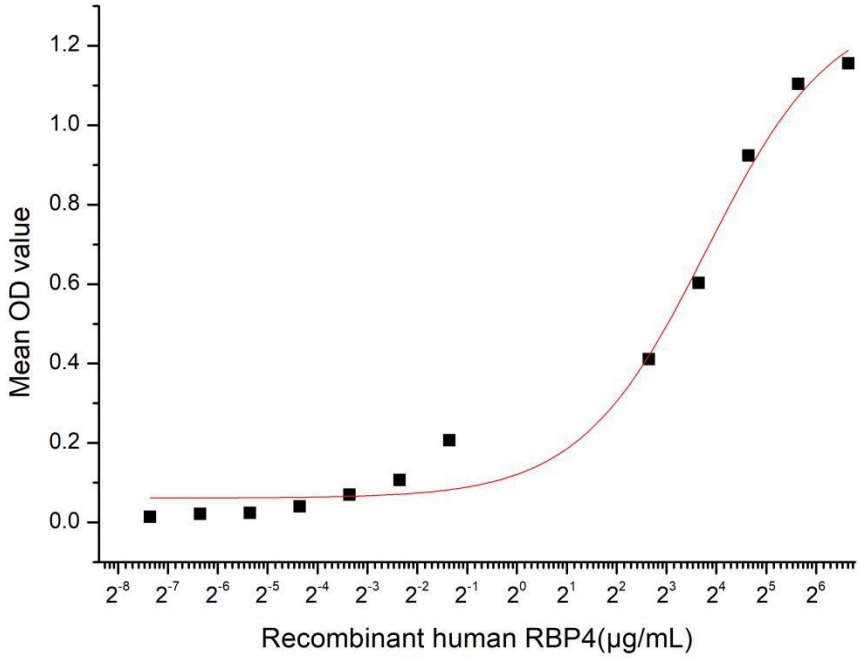


Figure 1. The binding activity of recombinant RBP4 and retinoic acid-BSA conjugate

[IDENTIFICATION]

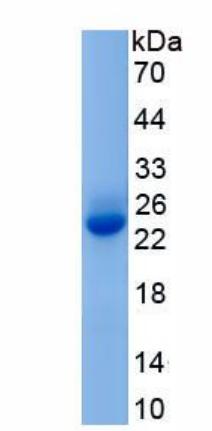


Figure 2. SDS-PAGE

Sample: Active recombinant RBP4, 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.