Anti-RBP4 Antibody [JA33-10]

ET1704-86

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 23 kDa
Clone number:	JA33-10

Description: Retinol binding protein 4, also known as RBP4, is a transporter protein for retinol (vitamin A alcohol). RBP4 has a molecular weight of approximately 21 kDa and is encoded by the RBP4 gene in humans. It is mainly, though not exclusively, synthesized in the liver and circulates in the bloodstream as a hepatokine bound to retinol in a complex with transthyretin. RBP4 has been a drug target for ophthalmology research due to its role in vision. RBP4 may also be involved in metabolic diseases as suggested by recent studies. This protein belongs to the lipocalin family and is the specific carrier for retinol (vitamin A) in the blood. It delivers retinol from the liver stores to the peripheral tissues. In plasma, the RBP-retinol complex interacts with transthyretin, which prevents its loss by filtration through the kidney glomeruli. A deficiency of vitamin A blocks secretion of the binding protein posttranslationally and results in defective delivery and supply to the epidermal cells.

Immunogen: Synthetic peptide within Human RBP4 aa152-201 / 201.

Positive control: HepG2 cell lysates, human serum, human liver carcinoma tissue, human kidney tissue, human liver tissue.

Subcellular location: Secreted.

Database links: SwissProt: P02753 Human

Recommended Dilutions:

WB	1:5,000
IHC-P	1:50-1:200

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

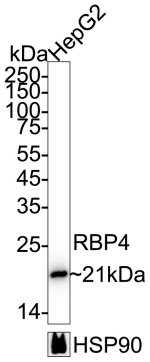

Fig1: Western blot analysis of RBP4 on HepG2 cell lysates with Rabbit anti-RBP4 antibody (ET1704-86) at 1/5,000 dilution.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 23 kDa
Observed band size: 21 kDa

Exposure time: 10 seconds; ECL: K1801;
4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1704-86) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

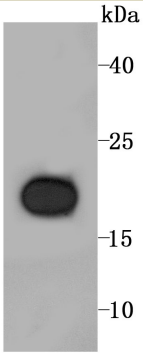

Fig2: Western blot analysis of RBP4 on human serum. Proteins were transferred to a PVDF membrane and blocked with 5% BSA in PBS for 1 hour at room temperature. The primary antibody (ET1704-86, 1/500) was used in 5% BSA at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:5,000 dilution was used for 1 hour at room temperature.

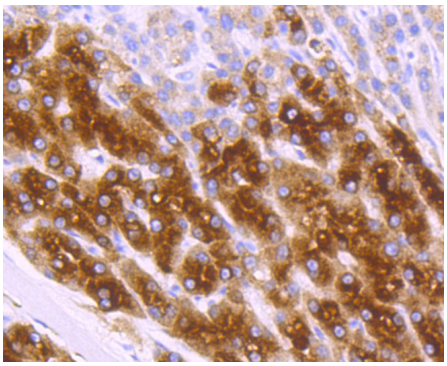

Fig3: Immunohistochemical analysis of paraffin-embedded human liver carcinoma tissue using anti-RBP4 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-86, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

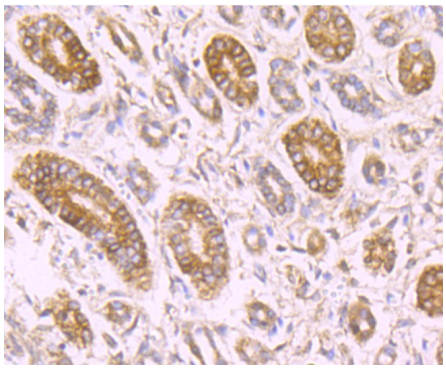

Fig4: Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-RBP4 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-86, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

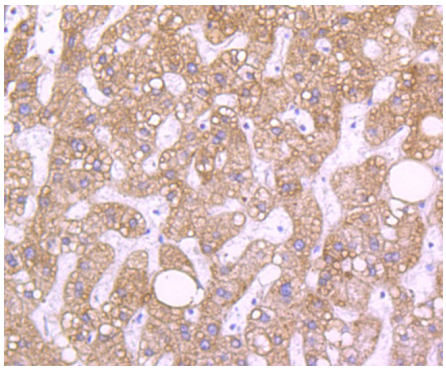

Fig5: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-RBP4 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-86, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Zhang KZ et al. RBP4 promotes denervation-induced muscle atrophy through STRA6-dependent pathway. J Cachexia Sarcopenia Muscle. 2024 Aug
2. Steinhoff JS et al. Biological Functions of RBP4 and Its Relevance for Human Diseases. Front Physiol. 2021 Mar