

# Recombinant Human RBP4 Protein (His Tag)

Catalog Number:PKSH031655



**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

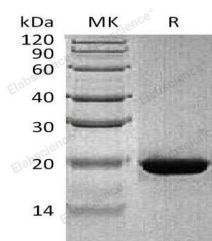
## Description

<b>Synonyms</b>	RDCCAS;Retinol-Binding Protein 4;Plasma Retinol-Binding Protein;PRBP;RBP;RBP4
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Leu 201
<b>Accession</b>	NP_006735.2
<b>Calculated Molecular Weight</b>	23 kDa
<b>Observed molecular weight</b>	23 kDa
<b>Tag</b>	C-His
<b>Bioactivity</b>	Measured by its ability to bind all-trans retinoic acid. The binding of retinoic acid results in the quenching of Trp fluorescence in RBP4. The 50% binding concentration (BC50) is > 1.0 $\mu$ M

## Properties

<b>Purity</b>	> 85 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per $\mu$ g of the protein as determined by the LAL method.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.2 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 85 % as determined by reducing SDS-PAGE.

## Background

Retinol-binding protein 4 (RBP4) is the specific carrier for retinol (also known as vitamin A); and is responsible for the conversion of unstable and insoluble retinol in aqueous solution into stable and soluble complex in plasma through their tight interaction. As a member of the lipocalin superfamily; RBP4 containing a  $\beta$ -barrel structure with a well-defined cavity is secreted from the liver; and in turn delivers retinol from the liver stores to the peripheral tissues. In plasma; the

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RBP4-retinol complex interacts with transthyretin (TTR); and this binding is crucial for preventing RBP4 excretion through the kidney glomeruli. RBP4 expressed from an ectopic source efficiently delivers retinol to the eyes; and its deficiency affects night vision largely. Recently; RBP4 as an adipokine; is found to be expressed in adipose tissue and correlated with obesity; insulin resistance (IR) and type 2 diabetes (T2DM).

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