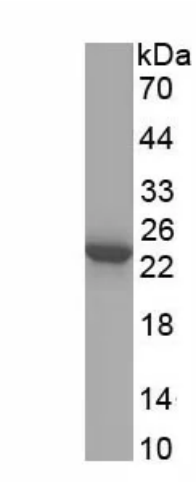
Active Retinol Binding Protein 4 (RBP4)

Catalog#:PER12567

概述（Summary）

别称（Alternative Names）	PRBP; RBP; Plasma retinol-binding protein; Retinol Binding Protein 4, Plasma
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Glu19-Leu201】
Accession #	P04916
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	22.7 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Retinol-binding protein that mediates retinol transport in blood plasma. Delivers retinol from the liver stores to the peripheral tissues. Transfers the bound all-trans retinol to STRA6, that then facilitates retinol transport across the cell membrane.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

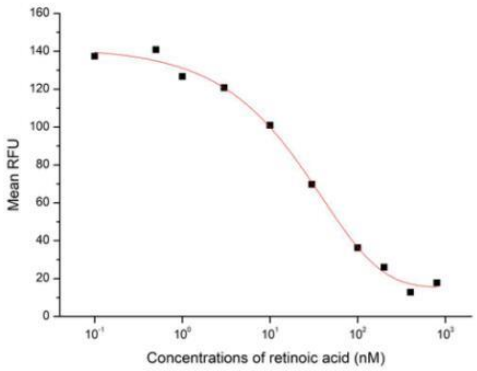


Figure 1 The binding activity of recombinant rat RBP4 with retinoic acid

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 β-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 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). The activity of recombinant rat RBP4 was measured by its ability to bind all-trans retinoic acid. The binding of retinoic acid results in the quenching of Trp fluorescence in RBP4. RBP4 was diluted to 50 ug/ml in 50 mM Tris, 10 mM CaCl2, 150 mM NaCl, pH 7.5 (assay buffer) and the retinoic acid was diluted to 800, 400, 200, 100, 30, 10, 3, 1, 0.5 and 0.1 uM in 95% ethanol. Mixing 112.5 µL of 50 µg/mL rrRBP4 and 12.5 µL of retinoic acid serial dilutions in microtubes and a blank containing 112.5 µL of 50 µg/mL rrRBP4 and 12.5 µL of 95% ethanol, then incubate at room temperature for 30 minutes. Loading 100 ul of the reaction mixtures and blank and read at excitation and emission wavelengths of 280 nm and 340 nm (top read), respectively, in endpoint mode. The result was shown in figure 1, the 50% binding concentration (BC50) is >22 µM.

注意事项（Note）

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