Datasheet for ABIN2666743

RBP4 Protein (AA 19-201, C-Term)

1 Image

Go to Product page

Overview

Quantity:	100 µg
Target:	RBP4
Protein Characteristics:	AA 19-201, C-Term
Origin:	Human
Source:	CHO Cells
Protein Type:	Recombinant
Biological Activity:	Active
Application:	Flow Cytometry (FACS)

Product Details

Purity:	> 95 % , as determined by Coomassie stained SDS-PAGE.
Sterility:	0.22 µm filtered
Endotoxin Level:	Less than 0.1 EU per µg of protein as determine by the LAL method.

Target Details

Target:	RBP4
Alternative Name:	RBP4 (RBP4 Products)
Background:	RBP4 belongs to the lipocalin family, and it is the retinol (vitamin A alcohol) specific transport protein present in plasma. It has a β barrel structure with a well defined cavity, which accommodates retinol. The stability of the retinol-RBP (holo-RBP) complex is further enhanced when the complex is bound to transthyretin (TTR). RBP4 delivers retinol from the liver stores to

Target Details

	the peripheral tissues. The interaction of RBP-retinol complex with TTR prevents its loss by filtration through the kidney glomeruli. Apo-RBP4 (without retinol) is reabsorbed in the proximal tubular cells. A deficiency of vitamin A blocks secretion of the binding protein post-translationally and results in defective delivery and supply to the epidermal cells. Defects in RBP4 cause retinol-binding protein deficiency and can cause night vision problems. RBP4 has been described as an adipokine and is found to be expressed in adipose tissue and correlated with obesity, insulin resistance, and type 2 diabetes. It has been postulated that RBP4 acts as the mechanistic link by which decreased adipocyte GLUT4 expression contributes to insulin resistance. Circulating RBP4 concentrations are increased in insulin-resistant mice. Moreover, transgenic overexpression of human RBP4 and injection of recombinant RBP4 decreased insulin sensitivity in normal mice, whereas genetic deletion of the RBP4 gene or normalization of RBP4 concentrations in obese mice improved insulin sensitivity. RBP4 concentrations are also increased in obese humans, and higher concentrations have been correlated with lower insulin sensitivity and other components of the metabolic syndrome.
Molecular Weight:	The 190 amino acid recombinant protein has a predicted molecular mass of approximately 22 kDa. The protein migrates as above 25 kDa in SDS-PAGE in DTT-reducing condition and above 22 kDa in non-reducing condition. The N-terminal amino acid is Gln.
Pathways:	Regulatory RNA Pathways, Positive Regulation of Peptide Hormone Secretion, Carbohydrate Homeostasis, Production of Molecular Mediator of Immune Response

Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Comment:	Biological activity: Measured by its ability to bind all-trans retinoic acid. The binding of retinoic acid results in the quenching of tryptophan fluorescence in RBP4. The ED50 of RBP4 to all-trans rentinoic acid is >0.5 µM.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Reconstitution:	For maximum results, quick spin vial prior to opening. After dilution, the protein can be stored between 2 °C and 8 °C for one month or from -20 °C to -70 °C for up to 3 months.
Concentration:	200 µg/mL

Handling

Buffer:	0.22 µm filtered protein solution is in PBS.
Handling Advice:	Avoid repeated freeze/thaw cycles.
Storage:	-20 °C
Storage Comment:	Unopened vial can be stored between 2°C and 8°C for three months, at -20°C for six months, or at -70°C for one year.

Images

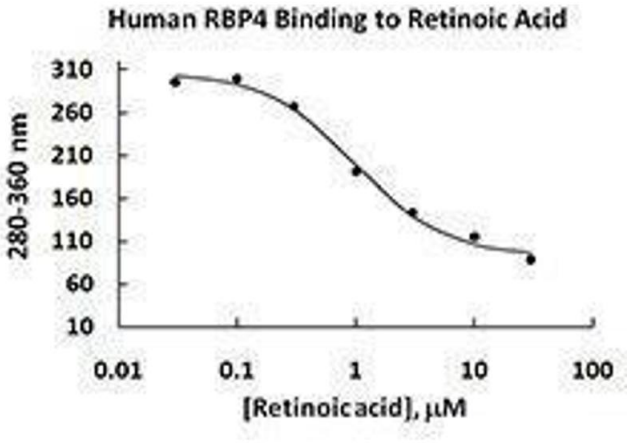

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Image 1.