BioVendor - Laboratorní medicína a.s.
Karásek 1767/1
621 00 Brno-Řečkovice a Mokrá Hora

Date of issue: 08.11.2018

PRODUCT DATASHEET

Retinol binding protein 4 Human E. coli

Cat. No.: RD172104100
Type: Recombinant protein
Size: 0.1 mg
Source: E. coli
Species: Human

Description
Total 204 AA. MW: 23 kDa (calculated). N-terminal His-tag, 21 extra AA (highlighted). The AA sequence is identical to UniProtKB/Swiss-Prot entry Q5VY30 (AA16–199).

Other names
Plasma retinol-binding protein, PRBP, RBP, RBP4, PRO2222

Introduction to the molecule
Retinol binding protein (RBP) 4 is the only specific transport protein for vitamin A in the circulation whose function is to deliver vitamin to target tissues (1). In obesity and type 2 diabetes, expression of Glut4 is significantly impaired in adipocytes. Glucose transport via Glut4 is the rate-limiting step for glucose use by muscle and adipose tissue (2). Yang et al. noted that adipocyte-specific deletion of Gluts led to notable elevation of RBP4 causing systemic insulin resistance, and that reduction of RBP4 improved insulin resistance (3). This identified a novel role of RBP4 in regulating insulin action and RBP4 is recorded as an adipocyte-derived hormone. Thus, measurement of serum or plasma RBP4 is a useful means for understanding of metabolic disorders.

Research topic
Diabetology - Other Relevant Products, Energy metabolism and body weight regulation

Amino Acid sequence
MSWWHHHHHH NWNIPTTQDT TERDCRVSSF RVKENFDKAR FSGTWYAMAK KDPEGLFLQD NIVAEFSVDE TGQMSATAKG RVRLLNNWDV CADMVGTFTD TEDPAKFKMK YWGVASFLQK GNDDHWIVDT DYDTYAVQYS CRLLNLDGTC ADSYSFVFSR DPNGLPPEAQ KIVRQRQEEL CLARQYRLIV HNGYCDGRSE RNLL

Purity
> 95%, as determined by SDS-PAGE.

Endotoxin
< 0.1 EU/µg

Formulation:
Filtered (0.4 µm) and lyophilized from 0.5 mg/ml in PBS buffer, pH 7.5

Reconstituion:
Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Filter sterilize your culture media/working solutions containing this non-sterile product before using in cell culture.

Shipping
At ambient temperature. Upon receipt, store the product at the temperature recommended below.

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Storage, Stability/Shelf Life
Store the lyophilized protein at –80 °C. Lyophilized protein remains stable until the expiry date when stored at –80 °C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at –80 °C for long term storage. Reconstituted protein can be stored at 4 °C for a week.

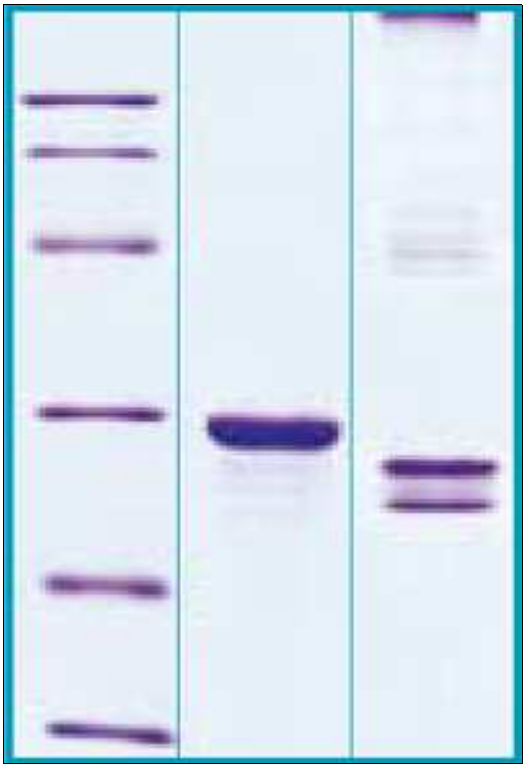
Quality control
BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

LAL to determine quantity of endotoxin.

Applications
Binding assay, ELISA, Western blotting

Note
This product is intended for research use only.



12% SDS-PAGE separation of Human RBP4
1. M.W. marker – 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 5µg / lane
3. non-reduced and non-heated sample, 5µg / lane

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