Acylation Stimulating Protein Human, Mouse Monoclonal Antibody, Clone: 4H3

Product Data Sheet

Source of Antigen: Peptide
Host: Mouse
Isotype: IgG1

Other names: ASP

Cat. No.:
RD1820711004H3 (0.1 mg)

Research topic
Energy metabolism and body weight regulation

Preparation
The antibody is a mouse monoclonal antibody against human peptide.

Amino Acid Sequence
The human peptide with amino acid sequence RASHLGLA (which is located in C-terminal part of the human ASP).

Species Reactivity
Human
Not yet tested in other species.

Purification Method
Affinity chromatography on a column with immobilized protein G.

Antibody Content
0.1 mg (determined by BCA method, BSA was used as a standard)

Formulation
The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

Reconstitution
Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

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

Storage/Stability
The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C.Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

Expiration
See vial label.

Lot Number
See vial label.

Quality Control Test
Indirect ELISA - to determine titer of the antibody
SDS PAGE - to determine purity of the antibody

Applications
ELISA, Western blotting

Introduction to the Molecule

Acylation Stimulating Protein (ASP) is one of activation fragments formed from the activation of complement cascade. ASP is produced through a process involving three proteins: C3, factor B and adipsin, which are secreted by adipocytes. Interactions of C3 with factor B and adipsin result in production of C3a followed by desargination of the carboxyl terminus to generate ASP. Human ASP contains 77 amino acids with 6 cysteins involved in disulfide bridges between residues 22–49, 23–56 and 36–57. ASP is a highly cationic molecule, containing no carbohydrate. It is vital for the regulation of lipid metabolism in adipocytes, because it stimulates glucose uptake, improves the activity of diacylglycerol acyltransferase and impairs hormone-sensitive lipase activity. ASP increases fat storage through an increase in triglyceride synthesis and a decrease in intracellular lipolysis. ASP deficient mice demonstrate reduced body weight, leptin and adipose tissue mass. ASP deficiency results in protection against development of obesity. In humans, there is a relationship between ASP, obesity, diabetes and dyslipidemia. A concentration of circulating ASP is positively related to body adiposity and decreases after weight loss. Reducing the production of ASP and ASP receptor antagonists represents potential approaches for treating obesity and type 2 diabetes, because ASP enhances triglyceride storage and interfering with ASP production reduces body fat and protects against diet-induced obesity and insulin resistance,.

Note

This product is for research use only.

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