Angiopoietin-Like Protein 3 Human, Rabbit Polyclonal Antibody

Product Data Sheet

Source of Antigen: *E. coli*
Host: Rabbit

Cat. No.:
RD181092100 (0.1 mg)

Other names: Angiopoietin-related protein 3, Angiopoietin-5, ANG-5, ANGPT5, UNQ153/PRO179, ANGPTL-3

Research topic

Animal studies, Energy metabolism and body weight regulation, Oncology

Preparation

The antibody was raised in rabbits by immunization with the recombinant Human ANGPTL3.

Amino Acid Sequence

The immunization antigen (26 kDa) is a protein containing 223 AA of recombinant Human ANGPTL3. N-Terminal His-tag, 16 extra AA (highlighted).

MRGSHHHHHH GMASHMSRID QDNSSFDSLS PEPKSRFAML DDVKILANGL LQLGHGLKDF VHKTKGQIND IFQKLNIFDQ SFYDLSLQTS EIKEEEKELR RTTYKLQVKN EEVKNMSLEL NSKLESLLEE KILLQQKVKY LEEQLTNLIQ NQPETPEHPE VTSLKTFVEK QDNSIKDLLQ TVEDQYKQLN QQHSQIKEIE NQLRRTSIQE PTEISLSSKP RAP

The amino acid sequence of the recombinant Human ANGPTL3 is 100% homologous to the amino acid sequence of the Human ANGPTL3 (AA 17-223) without signal sequence.

Species Reactivity

Human
Not yet tested in other species.

Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Human ANGPTL3.

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.

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

Angiopoietin-like proteins ANGPTL3 and ANGPTL4 are secreted proteins mainly expressed in liver that have been demonstrated to regulate triglyceride metabolism by inhibiting the lipolysis of triglyceride-rich lipoproteins. ANGPTL3 is structurally similar to angiopoietins, which are vascular endothelial growth factors.
The experimental results show that Angptl3 and Angptl4 function to regulate circulating triglyceride levels during different nutritional states and therefore play a role in lipid metabolism during feeding/fasting through differential inhibition of Lipoprotein lipase (LPL).
Using deletion mutants of human ANGPTL3, it was demonstrated that the N-terminal domain containing fragment - (17-207) and not the C-terminal fibrinogen-like domain containing fragment - (207-460) increased the plasma triglyceride levels in mice.
The fasting-induced adipose factor (FIAF, ANGPTL4, PGAR, HFARP) was identified as an adipocytokine up-regulated by fasting, by peroxisome proliferator-activated receptor agonists, and by hypoxia. At the protein level, in human and mouse blood plasma, FIAF was found to be present both as a native protein and in a truncated form. Differentiation of mouse 3T3-L1 adipocytes was associated with the production of truncated FIAF, whereas in human white adipose tissue and SGBS adipocytes, only the native FIAF could be detected. Interestingly, the truncated FIAF was produced by human liver.
Experimental data suggest that FIAF is mainly presented in human blood plasma in a truncated form (FIAF-S2), whose level is increased by fenofibrate treatment. Levels of both truncated and native FIAF showed marked inter individual variation but were not associated with body mass index and were not influenced by prolonged semistarvation.

References to this Product

- Stejskal D, Karpisek M, Humenanska V, Solichova P, Stejskal P. *Angiopoietin-like protein 3: development, analytical characterization, and clinical testing of a new ELISA.* Gen Physiol Biophys. 2007 Sep;26 (3):230-3
- Robciuc MR, Tahvanainen E, Jauhiainen M, Ehnholm C. *Quantitation of serum angiopoietin-like proteins 3 and 4 in a Finnish population sample.* J Lipid Res. 2010 Apr;51 (4):824-31

Note

This product is for research use only.

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