

Angiopoietin-Like Protein 6 Human E. coli

Product Data Sheet

Type: Recombinant

Source: E. coli

Species: Human

Other names: ANGPTL6

Cat. No.:

RD172306100

(0.1 mg)

Description

Total 460 AA. MW: 50.7 kDa (calculated). UniProtKB acc.no. Q8NI99 (Arg21-Leu470). N-terminal His-tag (10 extra AA). Protein identity confirmed by LC-MS/MS.

Introduction to the Molecule

Seven angiopoietin-like proteins (ANGPTLs) share the characteristic protein structure of the angiopoietin family (ANG), but differ in their inability to bind angiopoietin receptor, Tie-2. ANGPTL6 was originally named angiopoietin-related growth factor (AGF) having an N-terminal coiled-coil-like domain and a C-terminal fibrinogen-like domain, both of which are conserved in ANG. It is a circulating protein secreted by liver that induces angiogenesis by direct effect of epidermal ANGPTL6 on endothelial cells and proliferation of skin cells, and thereby promotes wound healing. Oike et al. generated Angptl6 ^{-/-} mice, 80% of which died at about embryonic day 13. The surviving null mice developed marked obesity, lipid accumulation in skeletal muscle and liver, and insulin resistance accompanied by reduced energy expenditure relative to controls. Conversely, mice with constitutive overexpression of ANGPTL6 showed leanness and increased insulin sensitivity resulting from increased energy expenditure, and were also protected from high-fat diet-induced obesity, insulin resistance, and nonadipose tissue steatosis. Hepatic overexpression of ANGPTL6 by adenoviral transduction in mice fed a high-fat diet resulted in significant weight loss and increased insulin sensitivity. It was concluded that ANGPTL6 is a hepatocyte-derived circulating factor that counteracts obesity and obesity-related insulin resistance, meaning that ANGPTL6 may be a novel biomarker for metabolic diseases.

Research topic

Energy metabolism and body weight regulation

Amino Acid Sequence

MKHHHHHHAS RAGAPRCTYT FVLPPQKFTG AVCWSGPAST RATPEAANAS ELAALRMRVG RHEELLRELQ RLAAADGAVA
GEVRALRKES RGLSARLGQL RAQLQHEAGP GAGPGADLGA EPAAALALLG ERVLNASAEA QRAAARFHQL DVKFRELAQL
VTQQSSLIAR LERLCPGGAG GQQQVLPPP LVPVVPVRLV GSTSDTSRML DPAPFPQRDQ TQRQQEPMAS PMPAGHPAVP
TKPVGPWQDC AEARQAGHEQ SGVYELRVGR HVVSVWCEQQ LEGGGWTVIQ RRQDGSVNFF TTWQHYKAGF GRPDGEYWL
LEPVYQLTSR GDHELLVLE DWGGRGARA YDGFSLPEP DHYRLRLGQY HGDAGDSLW HNDKPFSTVD RDRDSYSGNC
ALYQRGGWY HACAHSNLNG VWHHGGHYRS RYQDGVYWAE FRGGAYSLRK AAMLIRPLKL

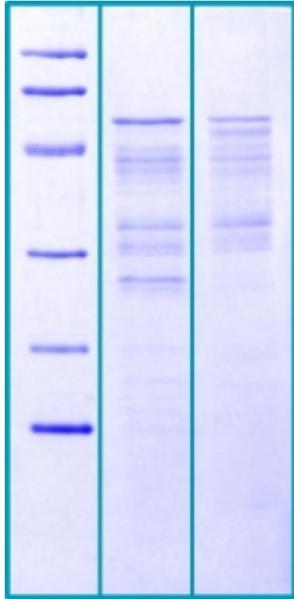
Source

E. coli

Purity

Purity as determined by densitometric image analysis: >90%

SDS-PAGE gel



14 % SDS-PAGE separation of Human Angiopoietin-Like Protein 6:

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and boiled sample, 2.5 µg/lane

3. non-reduced and non-boiled sample, 2.5 µg/lane

Endotoxin

< 1.0 EU/ug

Formulation

Filtered (0.4 µm) and lyophilized in 0.5 mg/mL in 0.05M Acetate buffer pH 4.0

Reconstitution

Add 0.1 M acetate buffer pH 4.0 to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10 µg/mL. In higher concentrations the solubility of this antigen is limited. 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.

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 Test

BCA to determine quantity of the protein.

SDS-PAGE to determine purity of the protein.

LAL TEST to determine endotoxin level.

Applications

ELISA, Western blotting

Note

This product is intended for research use only.

HEADQUARTERS: BioVendor Laboratorní medicína, a.s.	Karasek 1767/1	621 00 Brno CZECH REPUBLIC	Phone: +420-549-124-185 Fax: +420-549-211-460	E-mail: info@biovendor.com sales@biovendor.com Web: www.biovendor.com
AUSTRIA: BioVendor GesmbH	Nußdorfer Straße 20/10	1090 Vienna AUSTRIA	Phone: +43-1-89090-25 Fax: +43-1-89090-2515	E-mail: infoAustria@biovendor.com
GERMANY, SWITZERLAND: BioVendor GmbH	Otto-Hahn-Straße 16	34123 Kassel GERMANY	Phone: +49-6221-433-9100 Fax: +49-6221-433-9111	E-mail: infoEU@biovendor.com
USA, CANADA AND MEXICO: BioVendor LLC	128 Bingham Rd. Suite 1300	Asheville, NC 28806 USA	Phone: +1-828-575-9250 +1-800-404-7807 Fax: +1-828-575-9251	E-mail: infoUSA@biovendor.com