

Angiotensin-Like Protein 3 Human HEK293

Product Data Sheet

Type: Recombinant

Source: HEK293

Species: Human

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

Cat. No.:

RD172092050-HEK (0.05 mg)

Description

Total 450 AA. MW: 52.6 kDa (calculated). UniProtKB acc. No. Q9Y5C1 (Ser17-Glu460). C-terminal His-Tag (6 extra AA). Protein identity confirmed by LC-MS/MS.

Introduction to the Molecule

Angiotensin-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 angiotensins, 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.

Research topic

Energy metabolism and body weight regulation, Oncology

Amino Acid Sequence

SRIDQDNSSF DSLSPKPKSR FAMLDDVKIL ANGLLQLGHG LKDFVHKTKG QINDIFQKLN IFDQSFYDLS LQTSEIKEEE
 KELRRTTYKL QVKNNEVKNM SLELNKLES LLEEKILLQQ KVKYLEEQLT NLIQNQPETP EHPEVTSKLT FVEKQDNSIK
 DLLQTVEDQY KQLNQQHSQI KEIENQLRRT SIQEPTEISL SSKPRAPRTT PFLQLNEIRN VKHDGIPAEC TTIYNRGEHT
 SGMYAIRPSN SQVFHVYCDV ISGSPWTLIQ HRIDGSQNFN ETWENYKYGF GRLDGEFWLG LEKIYSIVKQ SNYVLRIELE
 DWKDNKHIE YSFYLGNET NYTLHLVAIT GNVNPAIPEN KDLVFSTWDH KAKGHFNCPG GYSGGWWHD ECGENNLNGK
 YNKPRAKSKP ERRRGLSWKS QNGRLYSIKS TKMLIHPTDS ESFE **HHHHHH**

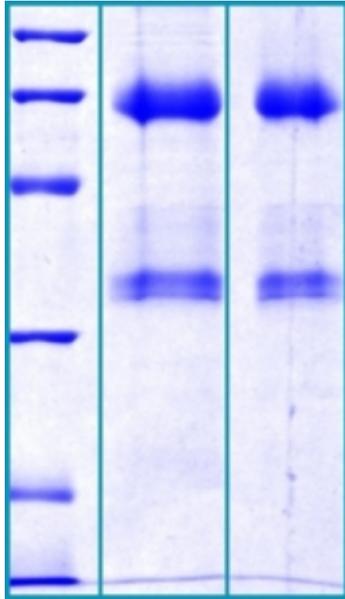
Source

HEK293

Purity

Purity as determined by densitometric image analysis: >95%

SDS-PAGE gel



14 % SDS-PAGE separation of Human ANGPTL3 :

1. MW 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

< 0.1 EU/ug

Formulation

Filtered (0.4 µm) and lyophilized in 0.5 mg/mL in 0.05 M phosphate buffer, 0.075 M NaCl, pH 7.4

Reconstitution

Add deionized water to prepare a working stock solution of 0.5 mg/mL and let the lyophilized pellet dissolve completely.

Product is not sterile! Filter your culture media/working solutions containing this 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

Cell culture and/or animal studies, ELISA, Western blotting

Note

This product is intended for research use only.

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