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ANGPTL3 Antibody (N-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6711A

Product Information

Application	WB, E
Primary Accession	Q9Y5C1
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18262
Calculated MW	53637
Antigen Region	82-114

Additional Information

Gene ID	27329
Other Names	Angiopoietin-related protein 3, Angiopoietin-5, ANG-5, Angiopoietin-like protein 3, ANGPTL3, ANGPT5
Target/Specificity	This ANGPTL3 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 82-114 amino acids from the N-terminal region of human ANGPTL3.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ANGPTL3 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANGPTL3
Synonyms	ANGPT5
Function	Acts in part as a hepatokine that is involved in regulation of lipid and glucose metabolism (PubMed:11788823, PubMed:12909640,

	PubMed:23661675, PubMed:25495645). Proposed to play a role in the trafficking of energy substrates to either storage or oxidative tissues in response to food intake (By similarity). Has a stimulatory effect on plasma triglycerides (TG), which is achieved by suppressing plasma TG clearance via inhibition of LPL activity. The inhibition of LPL activity appears to be an indirect mechanism involving recruitment of proprotein convertases PCSK6 and FURIN to LPL leading to cleavage and dissociation of LPL from the cell surface; the function does not require ANGPTL3 proteolytic cleavage but seems to be mediated by the N- terminal domain, and is not inhibited by GPIHBP1 (PubMed:12097324, PubMed:19318355, PubMed:20581395). Can inhibit endothelial lipase, causing increased plasma levels of high density lipoprotein (HDL) cholesterol and phospholipids (PubMed:17110602, PubMed:19028676). Can bind to adipocytes to activate lipolysis, releasing free fatty acids and glycerol (PubMed:12565906). Suppresses LPL specifically in oxidative tissues which is required to route very low density lipoprotein (VLDL)-TG to white adipose tissue (WAT) for storage in response to food; the function may involve cooperation with circulating, liver-derived ANGPTL8 and ANGPTL4 expression in WAT (By similarity). Contributes to lower plasma levels of low density lipoprotein (LDL)-cholesterol by a mechanism that is independent of the canonical pathway implicating APOE and LDLR. May stimulate hypothalamic LPL activity (By similarity).
Cellular Location	Secreted {ECO:0000250, ECO:0000305|PubMed:11877390}. Cell projection, lamellipodium {ECO:0000250|UniProtKB:Q9R182}. Note=Colocalized with HSPG2 and activated ITGB3 on podocytes. {ECO:0000250|UniProtKB:Q9R182}
Tissue Location	Expressed principally in liver. Weakly expressed in kidney. Binds to adipocytes. Increased expression and colocalization with activated ITGB3 in glomeruli of patients with nephrotic syndrome showing effaced podocyte foot processes (at protein level)

Background

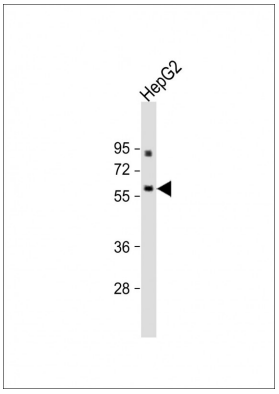
ANGPTL3 is a member of the angiopoietin-like family of secreted factors. It is predominantly expressed in the liver, and has the characteristic structure of angiopoietins, consisting of a signal peptide, N-terminal coiled-coil domain and the C-terminal fibrinogen (FBN)-like domain. The FBN-like domain in angiopoietin-like 3 protein was shown to bind alpha-5/beta-3 integrins, and this binding induced endothelial cell adhesion and migration. This protein may also play a role in the regulation of angiogenesis.

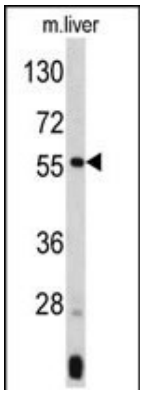
References

Shan,L., J. Biol. Chem. 284 (3), 1419-1424 (2009) Shimamura,M., Biochem. Biophys. Res. Commun. 301 (2), 604-609 (2003)

Images

Anti-ANGPTL3 Antibody (N-term) at 1:1000 dilution + HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 54 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Western blot analysis of ANGPTL3 Antibody (N-term) (Cat. #AP6711a) in mouse liver tissue lysates (35ug/lane). ANGPTL3 (arrow) was detected using the purified Pab.