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ANGPTL4 Antibody (Center)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9207c

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q9BY76
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB18264
Calculated MW	45214
Antigen Region	138-167

Additional Information

Gene ID	51129
Other Names	Angiopoietin-related protein 4, Angiopoietin-like protein 4, Hepatic fibrinogen/angiopoietin-related protein, HFARP, ANGPTL4, ARP4, HFARP, PGAR
Target/Specificity	This ANGPTL4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 138-167 amino acids from the Central region of human ANGPTL4.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:25 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	ANGPTL4 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ANGPTL4
Synonyms	ARP4, HFARP, PGAR {ECO:0000303|PubMed:10

Function	Mediates inactivation of the lipoprotein lipase LPL, and thereby plays a role in the regulation of triglyceride clearance from the blood serum and in lipid metabolism (PubMed:19270337, PubMed:21398697, PubMed:27929370, PubMed:29899144). May also play a role in regulating glucose homeostasis and insulin sensitivity (Probable). Inhibits proliferation, migration, and tubule formation of endothelial cells and reduces vascular leakage (PubMed:14583458, PubMed:17068295). Upon heterologous expression, inhibits the adhesion of endothelial cell to the extracellular matrix (ECM), and inhibits the reorganization of the actin cytoskeleton, formation of actin stress fibers and focal adhesions in endothelial cells that have adhered to ANGPTL4-containing ECM (in vitro) (PubMed:17068295). Depending on context, may modulate tumor-related angiogenesis (By similarity).
Cellular Location	Secreted. Secreted, extracellular space, extracellular matrix. Note=The unprocessed form interacts with the extracellular matrix (PubMed:17068295, PubMed:21398697). This may constitute a dynamic reservoir, a regulatory mechanism of the bioavailability of ANGPTL4 (Probable).
Tissue Location	Detected in blood plasma (at protein level) (PubMed:29899519). Detected in liver (PubMed:10698685). Detected in white fat tissue and placenta (PubMed:10866690). Expressed at high levels in the placenta, heart, liver, muscle, pancreas and lung but expressed poorly in the brain and kidney.

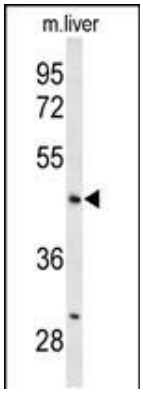
Background

ANGPTL4 is a member of the angiopoietin/angiopoietin-like gene family and encodes a glycosylated, secreted protein with a fibrinogen C-terminal domain. This protein is induced under hypoxic conditions in endothelial cells and is the target of peroxisome proliferation activators. The encoded protein is a serum hormone directly involved in regulating glucose homeostasis, lipid metabolism, and insulin sensitivity and also acts as an apoptosis survival factor for vascular endothelial cells. The encoded protein may play a role in several cancers and it also has been shown to prevent the metastatic process by inhibiting vascular activity as well as tumor cell motility and invasiveness. Decreased expression of this protein has been associated with type 2 diabetes.

References

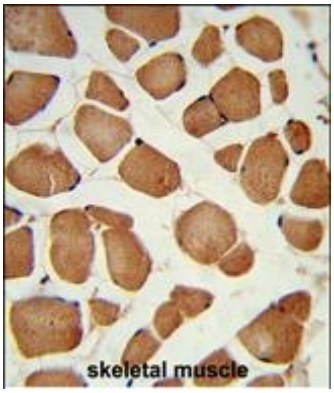
Maxwell,T.J., et.al., Int J Mol Sci 11 (1), 370-385 (2010)
Legry,V., et.al, J. Clin. Endocrinol. Metab. 94 (12), 5070-5077 (2009)
Sonnenburg,W.K., et.al, J. Lipid Res. 50 (12), 2421-2429 (2009)

Images

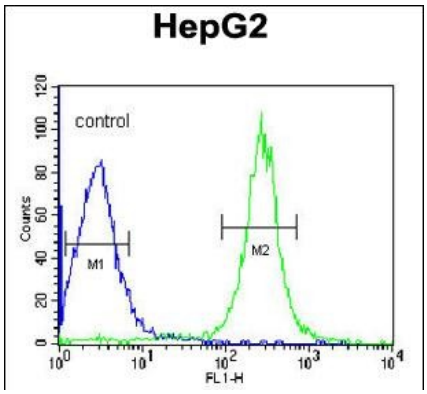


Western blot analysis of ANGPTL4 Antibody (Center) (Cat. #AP9207c) in mouse liver tissue lysates (35ug/lane). ANGPTL4 (arrow) was detected using the purified Pab.

Formalin-fixed and paraffin-embedded human skeletal



muscle reacted with ANGPTL4 Antibody (Center), which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



ANGPTL4 Antibody (Center) (Cat. #AP9207c) flow cytometric analysis of HepG2 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Citations

- The downregulation of ANGPTL4 inhibits the migration and proliferation of tongue squamous cell carcinoma.
- Establishment of monoclonal HCC cell lines with organ site-specific tropisms.