Qty: 100 µg/400 µL

Rabbit anti-ANGPTL4 (Mid)

Catalog No. 40-9800

Lot No.

Rabbit anti-ANGPTL4 (Mid)

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.521

IMMUNOGEN
Synthetic peptide derived from an internal region of the human ANGTPL4 protein, which differs from rat and mouse by one and two conservative amino acid replacements, respectively

SPECIFICITY
This antibody is specific for the ANGPTL4 (angiopoietin-like protein 4, hepatic fibrinogen/angiopoietin-related protein (HFARP), fasting-induced adipose factor (FIAF), PPARγ angiopoietin-related protein (PGAR)) protein. On Western blots, it identifies target bands at ~74 and/or ~35 kDa, representing full-length and truncated forms of the protein.

REACTIVITY
Reactivity has been confirmed with human HepG2 and NGP96 cell lysates, mouse placenta and rat liver homogenates, serum-stimulated mouse 3T3-L1 embryo fibroblast lysates, and 2 week-old mouse brain homogenates.

Sample	Western Blotting	Immuno-precipitation
Human	+++	0*
Mouse	+++	ND
Rat	+++	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)
*No reactivity observed under experimental conditions tested.

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 1-3 µg/mL

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

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BACKGROUND

ANGPTL4 (angiopoietin-like protein 4, hepatic fibrinogen/angiopoietin-related protein (HFARP), fasting-induced adipose factor (FIAF), PPARγ angiopoietin-related protein (PGAR)) is a secreted protein selectively expressed in adipose tissue, liver, and placenta[1-3] that plays a variety of roles *in vivo*, ranging from adipogenesis to angiogenesis to carcinogenesis. Several transcription factors exert influence on ANGPTL4 transcription, including PPARα, PPARγ, and HIF 1α.[1,3-4] PPARα and HIF 1α synergistically cause the activation of ANGPTL4 in cardiomyocytes;[5] induction of ANGPTL4 in the heart inhibits lipoprotein-derived fatty acid delivery.[5] As a transcriptional target of PPARγ, ANGPTL4 has been hypothesized to play a role in adipogenesis, insulin sensitivity, and energy metabolism.[3] The expression of ANGPTL4 is also under nutritional and hormonal control. During fasting conditions, transcription of ANGPTL4 in both liver and adipose tissue is induced independently of PPARα[1] While circulating levels of ANGPTL4 are increased in genetically obese mice,[3] rodents fed a high-fat diet demonstrate reduced circulating ANGPTL4 levels, suggesting that ANGPTL4 may be involved in response to the availability of nutrients.[1]

In endothelial cells, ANGPTL4 mRNA and protein levels increase in response to hypoxia.[6] ANGPTL4 has been observed to induce a strong pro-angiogenic response independent of vascular endothelial growth factor (VEGF), and its expression has been described in hypoxic human tissues as well as a variety of cancers, including liposarcoma, hepatocellular carcinoma, and conventional renal cell carcinoma.[6] Taken together, these findings suggest that ANGPTL4 may be involved in the mechanisms that compensate for ischemia by angiogenesis.

REFERENCES

1. Kersten S, et al. *J Biol Chem* 275:28488-28493, 2000.
2. Kim I, et al. *Biochem J* 346 (Pt 3):602-610, 2000.
3. Yoon JC, et al. *Mol Cell Biol* 20:5343-5349, 2000.
4. Belanger AJ, et al. *J Mol Cell Cardiol* 34:765-774, 2002.
5. Yu X, et al. *PNAS* 102 :1767-1772, 2005.
6. Le Jan S, et al. *Am J Pathol* 162:1521-1528, 2003.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
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AP	81-6122	81-6522
Biotin	81-6140	81-6540

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