biotechne **R**DSYSTEMS

Human Angiopoietin-like Protein 4/ANGPTL4 Antibody

DESCRIPTION		
Species Reactivity	Human	
Specificity	Detects human Angiopoietin-like Protein 4/ANGPTL4 Antibody in direct ELISA.	
Source	Monoclonal Mouse IgG _{2B} Clone # 944740	
Purification	Protein A or G purified	
Immunogen	Mouse myeloma cell line, NS0-derived human Angiopoietin-like Protein 4/ANGPTL4 protein Gly26-Ser406 Accession # Q9BY76	
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.	

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.			
	Recommended Concentration	Sample	
Flow Cytometry	0.25 μg/10 ⁶ cells	CHO cells transfected with hANGPTL4 and mCherry vs irrelevant cells	

DATA		
Flow Cytometry Hard a state of the state of	Detection of Angiopoietin-like Protein 4/ANGPTL4 in CHO cells by Flow Cytometry. CHO oells transfected with hANGPTL4 and mCherry (A) vs irrelevant oells (B) were stained with mCherry and Mouse Anti-Human Angiopoietin-like Protein 4/ANGPTL4 Monoclonal Antibody (Catalog # MAB11305). View our protocol for Staining Membrane-associated Proteins.	
PREPARATION AND S	STORAGE	
Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.	
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.	

The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. Stability & Storage

- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
 - 12 months from date of receipt, -20 to -70 °C as supplied.
 - 1 month, 2 to 8 °C under sterile conditions after reconstitution.
 - 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Rev. 10/11/2023 Page 1 of 2



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Human Angiopoietin-like Protein 4/ANGPTL4 Antibody

Monoclonal Mouse IgG_{2B} Clone # 944740 Catalog Number: MAB11305

RDsystems

BACKGROUND

Angiopoietin-like 4 (ANGPTL4), also known as FIAF, FARP, and PGAR, is a 55 kDa glycoprotein secreted by the liver and fat tissue. It is structurally related to the angoipoietins and contains an N-terminal coiled coil domain and a C-terminal fibrinogen-like domain which can be proteolytically separated *in vivo* (1). Mature human ANGPTL4 shares 26%-30% amino acid (aa) sequence identity with ANGPTL1, 2, 3, 5, 6, and 7. It shares approximately 75% aa sequence identity with mouse and rat ANGPTL4. The coiled coil domain, which is not glycosylated, mediates the formation of variable sized disulfide-linked oligomers (2). This domain directly inhibits lipoprotein lipase, resulting in increased circulating triglyceride levels (3, 4). In humans, the N-terminal fragment and full length ANGPTL4 physically associate with HDL (4). In mouse, however, full length ANGPTL4 associates with HDL, while the N-terminal fragment associates with LDL (4). Circulating ANGPTL4 is decreased in type II diabetics with a subsequent loss of its normal plasma glucose lowering activity (5). Its expression in adipose tissue is induced by fasting and suppressed by feeding (6). In hypoxic areas, ANGPTL4 is induced in both vascular endothelial cells and tumor cells (7, 8). The N-terminal fragment can function as an angiogenesis inhibitor (7, 8). In contrast, the C-terminal fragment modulates cell adhesion through interactions with heparan sulfate proteoglycans, Integrins β1 and β5, Vitronectin, and Fibronectin, thereby promoting keratinocyte migration and wound healing (7, 9, 10). ANGPTL4 additionally enhances the survival of hematopoietic and mesenchymal stem cells (11, 12). The expression of an undersialylated form of ANGPTL4 in renal podocytes contributes to proteinuria and nephrotic syndrome (13).

References:

- 1. Zhu, P. et al. (2012) Biosci. Rep. 32:211.
- 2. Ge, H. et al. (2004) J. Biol. Chem. 279:2038.
- 3. Sukonina, V. et al. (2006) Proc. Natl. Acad. Sci. USA 103:17450.
- 4. Mandard, S. et al. (2006) J. Biol. Chem. 281:934.
- 5. Xu, A. et al. (2005) Proc. Natl. Acad. Sci. USA 102:6086.
- 6. Kersten, S. et al. (2000) J. Biol. Chem. 275:28488.
- 7. Cazes, A. et al. (2006) Circ. Res. 99:1207.
- 8. Le Jan, S. et al. (2003) Am. J. Pathol. 162:1521.
- 9. Goh, Y.Y. et al. (2010) Am. J. Pathol. 177:2791.
- 10. Goh, Y.Y. et al. (2010) J. Biol. Chem. 285:32999.
- 11. Blank, U. et al. (2012) Eur. J. Haematol. 89:198.
- 12. Hou, M. et al. (2014) PLoS ONE 9:e85808.
- 13. Clement, L.C. et al. (2011) Nat. Med. 17:117.

Rev. 10/11/2023 Page 2 of 2



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