Human Angiopoietin-like Protein 4/ANGPTL4 Alexa Fluor® 488-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 944740

Catalog Number: FAB11305G

100 µg

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
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Flow Cytometry	Titration recommended for optimal concentration with starting range of 0.1-1 µg/1 million cells. Sample used for this experiment was CHO cells transfected with hANGPTL4 and mCherry vs irrelevant cells.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

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.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449