# Human Angiopoietin-like Protein 3/ANGPTL3 Alexa Fluor® 700-conjugated Antibody

Monoclonal Rat $IgG_{2A}$ Clone # 388620

Catalog Number: FAB38291N

100 µg

## DESCRIPTION

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| **Species Reactivity** | Human |
| **Specificity** | Detects human ANGPTL3 in ELISAs. |
| **Source** | Monoclonal Rat $IgG_{2A}$ Clone # 388620 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | *S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Angiopoietin-like 3<br>Ile19-Glu460<br>Accession # NP_055310 |
| **Conjugate** | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.*

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| **ELISA Capture (Matched Antibody Pair)** | Optimal dilution of this antibody should be experimentally determined. |
| **ELISA Detection (Matched Antibody Pair)** | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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| **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

ANGPTL3 is a secreted glycoprotein that is structurally related to the angiopoietins (1 - 3). Mature human ANGPTL3 contains an N-terminal coiled coil domain and a C-terminal fibrinogen-like domain (4). ANGPTL3 is expressed in the liver from early in development through adulthood (4, 5). Full length ANGPTL3 circulates in the plasma as do proteolytically separated N- and C-terminal fragments containing the coiled-coil domain and fibrinogen-like domains (6, 7). ANGPTL3 is found as 70 kDa, 50 kDa, and 32 kDa species (5, 6). ANGPTL3 directly inhibits lipoprotein lipase (LPL) and endothelial lipase (EL), enzymes responsible for hydrolyzing circulating triglycerides and HDL phospholipids (8, 9). This activity requires a putative heparin-binding motif which is N-terminal to the coiled-coil domain (6). Proteolytic removal of the fibrinogen-like domain from the N-terminal fragment serves to activate ANGPTL3 and increase its ability to inhibit LPL *in vitro* and function *in vivo* (6). ANGPTL3 promotes an increase in circulating triglyceride levels without altering VLDL or HDL secretion or uptake (6 - 8). ANGPTL3 knockout mice are hypolipidemic and have elevated LPL activity (10). ANGPTL3 expression *in vivo* is upregulated by LXR agonists and downregulated by insulin, leptin, and agonists of TRβ or PPARβ (11 - 14). Dysregulated ANGPTL3 expression and elevated plasma triglyceride levels are characteristic of some strains of obese and diabetic mice (7, 8, 12). ANGPTL3 does not bind Tie1 or Tie2, but its fibrinogen-like domain interacts with integrin αVβ3 to induce endothelial cell adhesion, migration, and neovascularization (15). ANGPTL3, secreted by fetal liver, also promotes the expansion of hematopoietic stem cells (16). Mature human ANGPTL3 shares 24% - 30% amino acid (aa) sequence identity with ANGPTL1, 2, 4, 5, 6, and 7. It shares 77% aa sequence identity with mouse ANGPTL3.

## PRODUCT SPECIFIC NOTICES

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