

DESCRIPTION

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	<i>S. frugiperda</i> insect ovarian cell line Sf21-derived recombinant human Angiopoietin-like 3 Ile19-Glu460 Accession # NP_055310
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% 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.

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

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

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.