Recombinant Mouse Angiopoietin-like Protein 4/ANGPTL4
Catalog Number: 9797-AN

DESCRIPTION
Source: Mouse myeloma cell line, NS0-derived
Leu169-Ser410, with a C-terminal 6-His tag
Accession # Q9Z1P8

N-terminal Sequence Analysis: Leu169
Predicted Molecular Mass: 28 kDa

SPECIFICATIONS
SDS-PAGE Activity: 36-43 kDa, reducing conditions
When Recombinant Mouse Angiopoietin-like Protein 4/ANGPTL4 is immobilized at 1 μg/mL, 100 μL/well, the concentration of LILRB2/CD85d/ILT4 Fc Chimera (Catalog # 2078-T4) that produces 50% of the optimal binding response is 0.09-0.54 μg/mL.
Endotoxin Level: <0.10 EU per 1 μg of the protein by the LAL method.
Purity: >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation: Lyophilized from a 0.2 μm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE
Reconstitution: Reconstitute at 500 μg/mL in PBS.
Shipping: 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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA
Binding Activity

When Recombinant Mouse Angiopoietin-like Protein 4/ANGPTL4 (Catalog# 9797-AN) is immobilized at 1 μg/mL, 100 μL/well, Recombinant Human LILRB2/CD85d/ILT4 Fc Chimera (Catalog # 2078-T4) binds with an ED₅₀ of 0.09-0.54 μg/mL.
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 angiopoietins and contains an N-terminal coiled coil domain and a C-terminal fibrinogen-like domain which can be proteolytically separated in vivo (1). Amino acid 169-410 contains the C-terminal fibrinogen like domain within mouse ANGPTL4, and this domain shares 75% and 97% sequence identity with human and rat homologs, respectively. 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 beta 1 and beta 5, 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). The immune-inhibitory receptor human leukocyte immunoglobulin-like receptor B2 (LILRB2) and its mouse orthologue paired immunoglobulin-like receptor (PIRB) have been identified as receptors for several ANGPTLs (14) including ANGPTL4.

References: