

ANGPTL4 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Bk89;Pgarg;Pgar;Ng27;Arp4;Pp1158;Hfarp;Fiaf;angiopoietin-like 4
Protein Construction:	A DNA sequence encoding the mouse ANGPTL4 (Q9Z1P8) (Lys167-Ser410) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	Q9Z1P8
Molecular Weight:	29.9 kDa (predicted); 38-45 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

ANGPTL4, also known as ANGPTL2, is a protein with hypoxia-induced expression in endothelial cells. It contains 1 fibrinogen C-terminal domain and is expressed at high levels in the placenta, heart, liver, muscle, pancreas and lung but expressed poorly in the brain and kidney. ANGPTL4 inhibits proliferation, migration, and tubule formation of endothelial cells and reduces vascular leakage. It may act as a regulator of angiogenesis and modulate tumorigenesis. It inhibits proliferation, migration, and tubule formation of endothelial cells and reduces vascular

leakage. It may also exert a protective function on endothelial cells through an endocrine action. ANGPTL4 is directly involved in regulating glucose homeostasis, lipid metabolism, and insulin sensitivity. In response to hypoxia, the unprocessed form of the protein accumulates in the subendothelial extracellular matrix (ECM). The matrix-associated and immobilized unprocessed form limits the formation of actin stress fibers and focal contacts in the adhering endothelial cells and inhibits their adhesion. It also decreases motility of endothelial cells and inhibits the sprouting and tube formation.

Reference

Lichtenstein L, et al. (2010) Angptl4 Protects against Severe Proinflammatory Effects of Saturated Fat by Inhibiting Fatty Acid Uptake into Mesenteric Lymph Node Macrophages. *Cell metabolism*. 12(6): 580-92.

Terada S, et al. (2011) Escaping Anoikis through ROS: ANGPTL4 controls integrin signaling through Nox1. *Cancer Cell*. 19(3):297-9.

Zhu PC, et al. (2011) Angptl4 protein elevates the pro-survival intracellular O₂(-):H₂O₂ ratio and confers anoikis resistance to tumors. *Cancer Cell*. 19(3):401-15.

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