Epoto Biotech

Recombinant Human Apolipoprotein H (Domain 1), Tag Free

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Catalog Number: HF-4002

General Information

Synonyms	Beta-2-glycoprotein 1, B2GPI, APOH,
Accession #	P02749
Source	Human embryonic kidney cell, HEK293-derived human Apolipoprotein H-domain 1 protein
	Gly20-Arg82
Predicted Moleucular weight	7.1 kDa

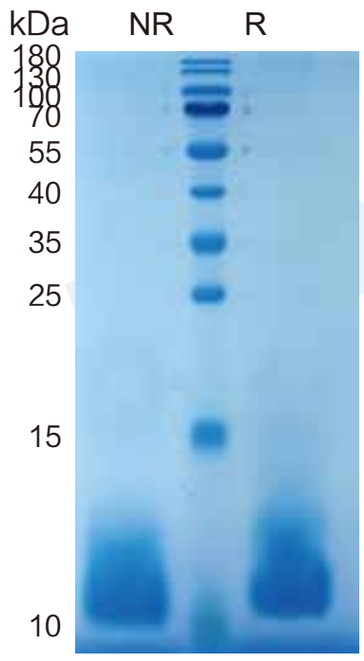
Components and Storage

Formulation	Solution protein.
	Dissolved in PBS buffer to a concentration of 1.0 mg/mL.
	This solution can be diluted into other aqueous buffers. Centrifuge the vial prior to opening.
Storage and Stability	Avoid repeated freeze-thaw cycles.
	It is recommended that the protein be aliquoted for optimal storage.
	12 months from date of receipt, -20 to -70 °C as supplied.
Shipping	Shipping with dry ice.

Quality

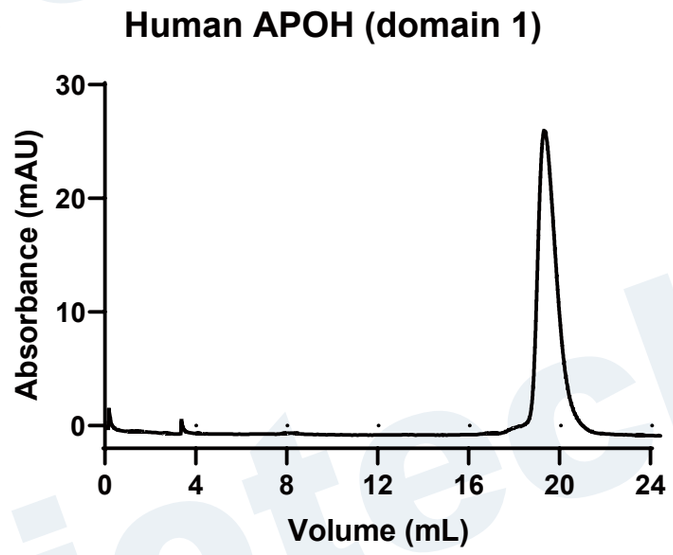
Purity	> 95%, determined by SDS-PAGE.
Endotoxin Level	<0.010 EU per 1 ug of the protein by the LAL method.
Activity	Testing in progress.

SDS-PAGE



4 ug/lane protein was resolved with SDS-PAGE under non-reducing (NR) and reducing (R) conditions and visualized by Coomassie Blue staining.

Gel filtration



Size-exclusion chromatography of recombinant human APOH (Domian 1) protein (280 nm absorbance)

Background

Apolipoprotein H (ApoH), also known as beta 2-Glycoprotein I/ beta 2-GPI, activated protein C-binding protein, B2GPI, and B2G1, is a 50 kDa variably glycosylated member of the complement control superfamily of proteins (1, 2). Mature human ApoH shares 76% and 82% aa sequence identity with mouse and rat ApoH, respectively. Hepatocyte-derived ApoH binds directly to negatively charged phospholipids (3). It circulates as a component of lipoprotein particles and as a lipid-free serum protein (4). Circulating levels of ApoH are postively correlated with triglyceride-rich lipoprotein (VLDL) components in type II diabetes (5). ApoH inhibits thrombosis by blocking the activation of Coagulation Factor XI but also shows procoagulant activity by inhibiting the activation of Protein C (6, 7). ApoH can be cleaved by Plasmin at Lys317 – Thr318, an action that is enhanced by heparin (8, 9). ApoH cleavage reduces its ability to bind phospholipids and inhibit Factor XI activation but confers the ability to bind Plasminogen (6, 8, 10). Cleaved ApoH also demonstrates antiangiogenic activity, whereas intact ApoH does not (14). The production of antibodies against ApoH is a hallmark of Antiphospholipid Syndrome (APS), an autoimmune disorder that leads to hypercoagulability and recurrent miscarriages (11). ApoH binds to the surface antigen of Hepatitis B Virus and is associated with the development of HBV-induced hepatocellular carcinoma (4, 12).

Reference

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