

Apolipoprotein E/APOE Protein, Rat (His)

Cat. No.:	HY-P701096
Synonyms:	APOEApolipoprotein E; Apo-E
Species:	Rat
Source:	E. coli
Accession:	P02650 (E19-Q312)
Gene ID:	25728
Molecular Weight:	45 kDa

PROPERTIES

AA Sequence

E G E L E V T D Q L	P G Q S D Q P W E Q	A L N R F W D Y L R	W V Q T L S D Q V Q
E E L Q S S Q V T Q	E L T V L M E D T M	T E V K A Y K K E L	E E Q L G P V A E E
T R A R L A K E V Q	A A Q A R L G A D M	E D L R N R L G Q Y	R N E V N T M L G Q
S T E E L R S R L S	T H L R K M R K R L	M R D A D D L Q K R	L A V Y K A G A Q E
G A E R G V S A I R	E R L G P L V E Q G	R Q R T A N L G A G	A A Q P L R D R A Q
A L S D R I R G R L	E E V G N Q A R D R	L E E V R E Q M E E	V R S K M E E Q T Q
Q I R L Q A E I F Q	A R I K G W F E P L	V E D M Q R Q W A N	L M E K I Q A S V A
T N S I A S T T V P	L E N Q		

Appearance

Lyophilized powder

Formulation

Lyophilized from a 0.22 μ m filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0.

Endotoxin Level

<1 EU/ μ g, determined by LAL method.

Reconstitution

It is not recommended to reconstitute to a concentration less than 100 μ g/mL in ddH₂O.

Storage & Stability

Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.

Shipping

Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background

APOE is a vital protein involved in the transportation of lipids between organs through plasma and interstitial fluids. It plays a crucial role in the production, conversion, and clearance of plasma lipoproteins. APOE interacts with various lipoprotein particles, such as chylomicrons, chylomicron remnants, VLDL, and IDL, with a preference for HDL. It also binds to numerous cellular receptors, including LDLR and VLDLR, facilitating the uptake of APOE-containing lipoproteins by cells. Additionally, APOE possesses heparin-binding activity and binds to heparan-sulfate proteoglycans on cell surfaces, which aids in the

capture and receptor-mediated uptake of APOE-containing lipoproteins. Furthermore, APOE forms a homotetramer and may interact with ABCA1 in HDL biogenesis. It can also interact with APP/A4 amyloid-beta peptide, MAPT, MAP2, and secreted SORL1 in the cerebrospinal fluid, and with PMEL to induce fibril nucleation on intraluminal vesicles.

Caution: Product has not been fully validated for medical applications. For research use only.

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