

APLN Protein, Human (HEK293, Fc)

Cat. No.:	HY-P77874
Synonyms:	Apelin; APJ endogenous ligand; APEL
Species:	Human
Source:	HEK293
Accession:	Q9ULZ1 (G23-F77)
Gene ID:	8862
Molecular Weight:	32-40 kDa

PROPERTIES

AA Sequence	G S L M P L P D G N G L E D G N V R H L V Q P R G S R N G P G P W Q G G R R K F R R Q R P R L S H K G P M P F
Biological Activity	Immobilized Human APLN, hFc Tag at 0.5 µg/mL (100 µl/Well) on the plate. Dose response curve for Biotinylated Anti-APLN Antibody, hFc Tag with the EC ₅₀ of 22.2 ng/mL determined by ELISA.
Appearance	Lyophilized powder.
Formulation	Lyophilized from 0.22 µm filtered solution in PBS, 200mM Arginine (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	APLN Protein emerges as the endogenous ligand for the apelin receptor (APLNR), actively participating in the internalization of the receptor. Notably, APLN exhibits differential dissociation characteristics, with apelin-36 dissociating more robustly than (pyroglu)apelin-13 from APLNR. Beyond its role as a ligand, APLN serves diverse physiological functions, influencing cardiac precursor cell movements during gastrulation and heart morphogenesis. Additionally, it has an inhibitory effect on cytokine production in response to T-cell receptor/CD3 cross-linking, suggesting a potential role in modulating immune responses, particularly in neonates through oral intake in colostrum and milk. APLN also contributes to early coronary
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blood vessel formation and mediates myocardial contractility in an ERK1/2-dependent manner. Furthermore, it may play a role in the central control of body fluid homeostasis by influencing vasopressin release and drinking behavior. In the context of microbial infection, APLN acts as an endogenous ligand for APLNR, serving as an alternative coreceptor with CD4 for HIV-1 infection and exhibiting inhibitory activity on HIV entry in cells coexpressing CD4 and APLNR, with apelin-36 demonstrating greater inhibitory efficacy than other synthetic apelin derivatives.

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

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