

ApoJ/Clusterin, human recombinant

CATALOG #: 7584-10 10 µg
 7584-50 50 µg
 7584-1000 1000 µg

ALTERNATE NAMES: CLI, AAG4, KUB1, SGP2, SGP-2, SP-40, TRPM2, MGC24903, Clusterin, Apolipoprotein J, ApoJ

SOURCE: E.Coli

PURITY: ≥90% by SDS-PAGE analysis

MOL. WEIGHT: 51.1 kDa (23-449 aa with a C-terminal His-tag)

FORM: Lyophilized

FORMULATION: Lyophilized from 2 mg/ml solution of ApoJ in 25 mM Na₂HPO₄ and 100 mM NaCl (pH 7.5).

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in dH₂O to a working concentration of 0.5 mg/ml and let the lyophilized pellet dissolve completely.

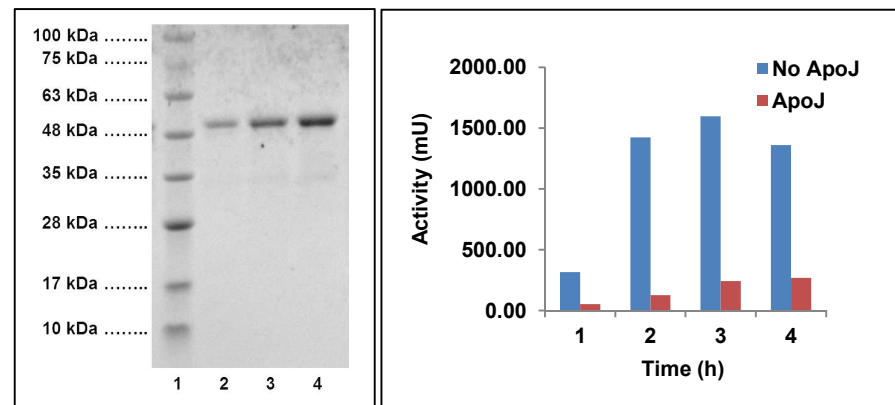
STORAGE CONDITIONS: The lyophilized human ApoJ is best-stored desiccated below 0°C. Reconstituted ApoJ should be stored in working aliquots at -20°C.

DESCRIPTION: Native Apolipoprotein J (ApoJ), also named Clusterin, is a heavily glycosylated, 75-80 kDa disulfide-linked heterodimeric protein. Despite being cloned since 1989, no genuine function has been attributed to ApoJ so far. The protein has been reportedly implicated in several diverse physiological processes such as sperm maturation, lipid transportation, complement inhibition, tissue remodeling, membrane recycling, cell-cell and cell-substratum interactions, stabilization of stressed proteins in a folding-competent state and promotion or inhibition of apoptosis. ApoJ gene is differentially regulated by cytokines, growth factors and stress-inducing agents. Clusterin is up- or down regulated on the mRNA or protein level in many pathological and clinically relevant situations including cancer, organ regeneration, infection, Alzheimer disease, retinitis pigmentosa, myocardial infarction, renal tubular damage, autoimmunity and others.

ACTIVITY: The chaperone activity of ApoJ was confirmed by its ability to bind to proteins under physical stress such as heat (e.g. Thyroglobulin) and chemical stress such as change in pH (e.g. Procathepsin K).

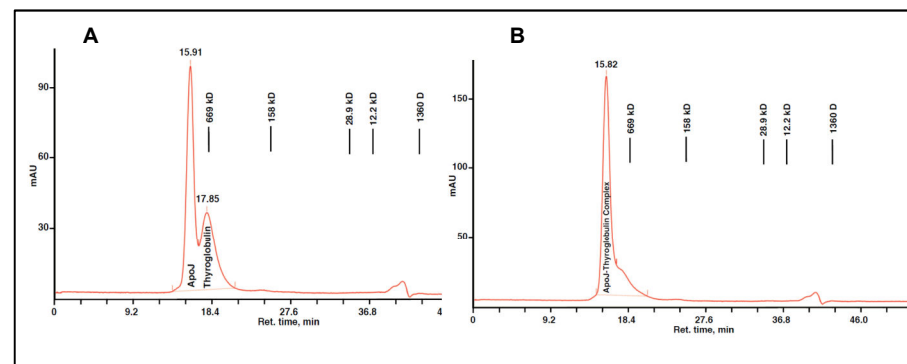
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For research use only



SDS-PAGE (4-20%) of r-ApoJ:
 1: Protein Marker
 2: ApoJ /Clusterin (2 µg)
 3: ApoJ /Clusterin (4 µg)
 4: ApoJ /Clusterin (6 µg)

Human Procathepsin K (1026) was activated at pH 4 in the presence and absence of ApoJ, and then its overall activity was measured by Cathepsin K Activity Assay Kit (K141-100). The above results indicate that ApoJ slows the activation/degradation process of Procathepsin K under chemical stress.



SEC analysis of a mixture of Thyroglobulin and ApoJ at room temperature (A) and after heating at 60°C for 1 h (B) confirming the chaperone activity of ApoJ by protecting Thyroglobulin when exposed to stress conditions such as heat. The analyses were performed using a Superdex 200 HR 10/30 column at 0.5 ml/min in 50 mM Tris and 0.25 M NaCl pH 7.5.

RELATED PRODUCTS:

- APO-J / Clusterin, human plasma (4325-10, -500)
- Apolipoprotein CI, Human Plasma (Cat # 4703-100)
- Apolipoprotein CII, Human Plasma (Cat # 4704-50)
- Apolipoprotein CIII, Human Plasma (Cat # 4706-100)

FOR RESEARCH USE ONLY! Not to be used in humans.