

Product Specification Sheet

**Human Apolipoprotein J (ApoJ/Clusterin) Antibodies**

Cat. # APOJ11-A	Goat Anti-Human ApoJ IgG # 1	<b>SIZE:</b> 100 ug
Cat. # APOJ11-C	Recombinant purified human ApoJ protein control for WB	<b>SIZE:</b> 100 ul

Sulfated glycoprotein-2 (SGP-2) is the major secreted product of Sertoli cells and is thought to play a critical role in spermatogenesis. The protein was shown to be a normal constituent of human blood. It consists of two 40-kD chains, alpha and beta, covalently joined by disulfide bonds. They established that SP-40,40 is a member of the human complement system by directly demonstrating its presence within the S-protein-containing soluble variant of the C5b-9 complex, SC5b-9. SP-40,40 is also called complement lysis inhibitor. It acts as a control mechanism of the complement cascade; specifically, it prevents the binding of a C5b-C7 complex to the membrane of the target cell and in this way inhibits complement-mediated cytolysis.

Apolipoprotein J is the human analog of the rat protein present in high concentrations in the testis, sulfated glycoprotein-2. It is a 70-kD protein associated with high-density lipoproteins (HDL) in human plasma. There is a single copy of the APOJ gene in the human and mouse genomes. The protein is synthesized as a 427-amino acid polypeptide that is posttranslationally cleaved at an internal bond between arg205 and ser206. Two subunits, designated alpha (34 to 36 kD), corresponding to residues 1-205, and beta (36 to 39 kD), corresponding to residues 206-427, are associated through disulfide bonds. APOJ mRNA (1.9 kb) in all but one tissue examined. Its concentration was relatively high in brain, ovary, testis, and liver, lower in heart, spleen, lung, and breast, and absent in T lymphocytes. Apolipoprotein J is distinct from other known apolipoproteins in molecular weight, subunit structure, and isoelectric point.

ApoJ is induced in myocarditis and numerous other inflammatory injuries. Deficient and wildtype mice exhibited similar initial onset of myocarditis. Furthermore, autoantibodies against the primary antigen cardiac myosin were induced to the same extent. After resolution of inflammation, apoJ-deficient, but not wildtype, mice exhibited cardiac function impairment and severe myocardial scarring. These results suggested that apoJ normally limits progression of autoimmune myocarditis and protects the heart from postinflammatory tissue destruction.

**Source of Antigen, Antibodies, and positive controls**

<b>Antigen</b>	Purified human ApoJ protein
<b>Ab Host/type</b>	Goat, polyclonal IgG purified by chromatography using immobilized antigens followed by extensive cross-adsorption against other apolipoproteins and human serum proteins to remove any unwanted specificities. chromatography.
<b>2-Ab</b>	<b>Rabbit Anti-goat IgG-HRP conjugate</b> Cat # 30220 (AP, biotin, FITC conjugates also available)
<b>-ve control IgG</b>	# 20011-1, Goat (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control ) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human ApoJ was expressed as a recombinant protein with N-terminal fusion of T7-Tag (16AA) and C-terminal fusion of His-Tag (9AA). The ApoJ Human His-Tagged Fusion Protein, produced in E.coli, is ~26 kDa protein containing 222 amino acid residues of the APO-J Human and 25 additional amino acid residues – His-Tag, T7-Tag. Purity is >95% by SDS-APGE (~26 kda).

Human APOJ11-C protein for Western blot +ve control (**Cat # APOJ11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **APDJ11-C** for good visibility with antibody Cat # **APDJ11-A**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **APDJ11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. This preparation is intended for qualitative purpose and not to serve as standard of known concentration. Do not freeze, thaw, or heat repeatedly

**Form & Storage of Antibodies/Peptide Control**

**Affinity pure IgG)**

100 ul/vial solution lyophilized powder  
Supplied in PBS, pH 7, contains 0.05% sodium azide  
**Reconstitute powder** in PBS at 1 mg/ml

**Recommended Usage**

**Western Blotting** 1-2 ug/ml of aff pure IgG using ECL technique). Recombinant Human ApoJ is approx. ~26 kDa.

**ELISA** (1:10K-1:100K; using 50-100 ng of control antigen/well).

**Histochemistry & Immunofluorescence:** not tested. We recommend a dilution of 1:200 to 1:500 (1).

**Specificity & Cross-reactivity**

Anti-ApoJ IgG was extensive cross-adsorbed against other apolipoproteins and human serum proteins to remove any unwanted specificities. Typically less than 1% cross reactivity against other types of apolipoprotein was detected by ELISA against purified standards. Antibody #APOJ11-A reacts with human apolipoprotein J and has negligible cross-reactivity with Type A-I, A-II, B, C-I, C-II, C-III and E apolipoproteins or other serum proteins. Specific cross reaction of anti- apolipoprotein antibodies with antigens from other species has not been determined.

**General References:** Chen, X. (2003) PNAS, 100: 9530-9535; 6. de Silva, H. V.(1990) Biochemistry 29: 5380-5389; de Silva, H. V.(1990) J. Biol. Chem. 265: 14292-14297; McLaughlin, L. (2000) J. Clin. Invest. 106: 1105-1113; Murphy, B. F.(1988) J. Clin. Invest. 81: 1858-1864;

\*This product is for In vitro research use only.

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