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# CLU Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP10943a

## Product Information

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|---|---|
| **Application** | WB, FC, IHC-P-Leica, E |
| **Primary Accession** | P10909 |
| **Other Accession** | NP_001164609.1, NP_976084.1 |
| **Reactivity** | Human, Rat, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB18701 |
| **Calculated MW** | 52495 |
| **Antigen Region** | 71-99 |

## Additional Information

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| **Gene ID** | 1191 |
| **Other Names** | Clusterin, Aging-associated gene 4 protein, Apolipoprotein J, Apo-J, Complement cytolysis inhibitor, CLI, Complement-associated protein SP-40, Ku70-binding protein 1, NA1/NA2, Testosterone-repressed prostate message 2, TRPM-2, Clusterin beta chain, ApoJalpha, Complement cytolysis inhibitor a chain, Clusterin alpha chain, ApoJbeta, Complement cytolysis inhibitor b chain, CLU, APOJ, CLI, KUB1 |
| **Target/Specificity** | This CLU antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 71-99 amino acids from the N-terminal region of human CLU. |
| **Dilution** | WB~~1:1000 FC~~1:10~50 IHC-P-Leica~~1:500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | CLU Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | CLU ( HGNC:2095) |
| **Function** | [Isoform 1]: Functions as extracellular chaperone that prevents aggregation of non native proteins (PubMed:11123922, PubMed:19535339). Prevents stress-induced aggregation of blood plasma proteins (PubMed:11123922, PubMed:12176985, PubMed:17260971, PubMed:19996109). Inhibits formation of amyloid fibrils by APP, APOC2, B2M, CALCA, CSN3, SNCA and aggregation-prone LYZ variants (in vitro) (PubMed:12047389, PubMed:17407782, PubMed:17412999). Does not require ATP (PubMed:11123922). Maintains partially unfolded proteins in a state appropriate for subsequent refolding by other chaperones, such as HSPA8/HSC70 (PubMed:11123922). Does not refold proteins by itself (PubMed:11123922). Binding to cell surface receptors triggers internalization of the chaperone-client complex and subsequent lysosomal or proteasomal degradation (PubMed:21505792). Protects cells against apoptosis and against cytolysis by complement: inhibits assembly of the complement membrane attack complex (MAC) by preventing polymerization of C9 pore component of the MAC complex (PubMed:2780565, PubMed:1903064, PubMed:2601725, PubMed:2721499, PubMed:1551440, PubMed:9200695, PubMed:34667172). Intracellular forms interact with ubiquitin and SCF (SKP1-CUL1-F-box protein) E3 ubiquitin-protein ligase complexes and promote the ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:20068069). Promotes proteasomal degradation of COMMD1 and IKBKB (PubMed:20068069). Modulates NF-kappa-B transcriptional activity (PubMed:12882985). A mitochondrial form suppresses BAX-dependent release of cytochrome c into the cytoplasm and inhibit apoptosis (PubMed:16113678, PubMed:17689225). Plays a role in the regulation of cell proliferation (PubMed:19137541). An intracellular form suppresses stress-induced apoptosis by stabilizing mitochondrial membrane integrity through interaction with HSPA5 (PubMed:22689054). Secreted form does not affect caspase or BAX- mediated intrinsic apoptosis and TNF-induced NF-kappa-B-activity (PubMed:24073260). Secreted form act as an important modulator during neuronal differentiation through interaction with STMN3 (By similarity). Plays a role in the clearance of immune complexes that arise during cell injury (By similarity). |
| **Cellular Location** | [Isoform 1]: Secreted. Note=Can retrotranslocate from the secretory compartments to the cytosol upon cellular stress. [Isoform 6]: Cytoplasm. Note=Keeps cytoplasmic localization in stressed and unstressed cell. |
| **Tissue Location** | Detected in blood plasma, cerebrospinal fluid, milk, seminal plasma and colon mucosa. Detected in the germinal center of colon lymphoid nodules and in colon parasympathetic ganglia of the Auerbach plexus (at protein level). Ubiquitous. Detected in brain, testis, ovary, liver and pancreas, and at lower levels in kidney, heart, spleen and lung. |

## Background

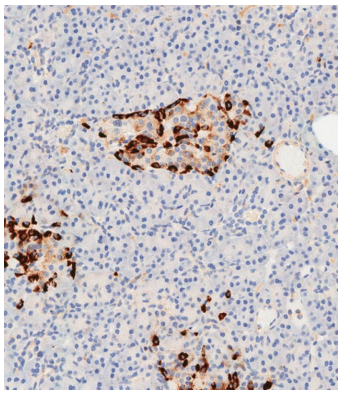
The protein encoded by this gene appears to be involved in several basic biological events such as cell death, tumor progression, and neurodegenerative disorders. However, the function of this protein is unknown. Three transcript variants encoding different isoforms have been found for this gene, and one of them is secreted and processed into a mature form.

## References

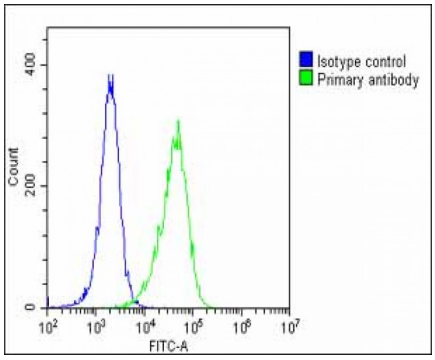
Jun, G., et al. Arch. Neurol. (2010) In press :
Zhou, Y., et al. DNA Cell Biol. (2010) In press :
Mengel-From, J., et al. Neurobiol. Aging (2010) In press :

Golenkina, S.A., et al. Mol. Biol. (Mosk.) 44(4):620-626(2010)
Thambisetty, M., et al. Arch. Gen. Psychiatry 67(7):739-748(2010)

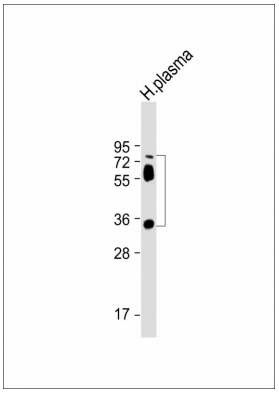
## Images



Immunohistochemical analysis of paraffin-embedded human pancreas tissue using AP10943A performed on the Leica® BOND RXm. Samples were incubated with primary antibody(1/500) for 1 hours at room temperature. A undiluted biotinylated CRF Anti-Polyvalent HRP Polymer antibody was used as the secondary antibody.




Overlay histogram showing Hela cells stained with AP10943A(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AP10943A, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Rabbit IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(1583138) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was rabbit IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.




Anti-CLU Antibody (N-term) at 1:2000 dilution + human plasma lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 52 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.