10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Clusterin Antibody

Catalog # ASC10434

Product Information

Application	WB, E, IHC-P
Primary Accession	P10909
Other Accession	NP_001822, 42716297
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	52495
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	Clusterin antibody can be used for the detection of Clusterin by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunohistochemistry starting at 10 g/mL.

Additional Information

Gene ID	1191
Other Names	Clusterin Antibody: CLI, AAG4, APOJ, CLU1, CLU2, KUB1, SGP2, APO-J, SGP-2, SP-40, TRPM2, TRPM-2, NA1/NA2, CLI, Clusterin, Aging-associated gene 4 protein, Apo-J, clusterin
Target/Specificity	CLU;
Reconstitution & Storage	Clusterin antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	Clusterin Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

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

Clusterin Antibody: Clusterin, also known as Apolipoprotein J (ApoJ), is a ubiquitous multifunctional glycoprotein that can interact with a broad spectrum of molecules such as complement components, various receptors, and the Alzheimer's b-amyloid peptide. Clusterin expression is increased in Alzheimer's disease brain tissue and clusterin-immunoreactive amyloid plaques are found associated with phospho-tau-positive dystrophic neurites and it has been suggested that clusterin facilitates the conversion of diffuse b-amyloid deposits into amyloid and enhances tau phosphorylation in neurites around these plaques. Other reports show that clusterin expression is decreased in proliferating cells and is upregulated in quiescent and senescent cells, suggesting that it may also play a role in aging and tumorigenesis suppression. Clusterin exists in at least two distinct isoforms.

References

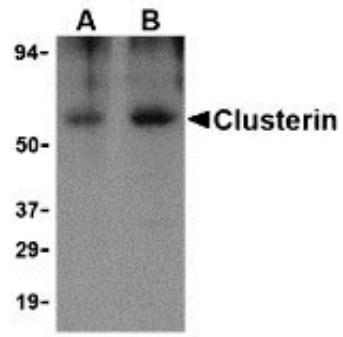
Calero M, Rostagno A, Frangione B, et al. Clusterin and Alzheimer’s disease. Subcell. Biochem. 2005; 38:273-98.

Martin-Rehrmann MD, Hoe HS, Capuani EM, et al. Association of apolipoprotein J-positive β-amyloid plaques with dystrophic neurites in Alzheimer’s disease brain. Neurotox. Res. 2005; 7:231-42.

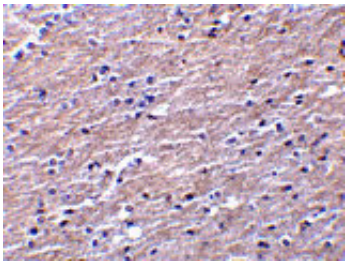
Trougakos IP and Gonos ES. Clusterin/Apolipoprotein J in human aging and cancer. Int. J. Biochem. Cell Biol. 2002; 34:1430-48.

Martinon F and Tschopp J. NLRs join TLRs as innate sensors of pathogens. TRENDS Imm. 2005; 26:447-54.

Images



Western blot analysis of Clusterin in human brain tissue lysate with Clusterin body at (A) 0.5 and (B) 1 µg/mL.



Immunohistochemistry of Clusterin in human brain tissue with Clusterin antibody at 10 µg/mL.

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