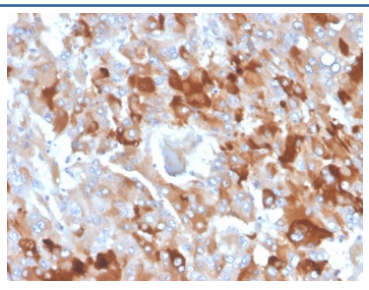
CLU Antibody / Cytoprotective Stress Response Marker [clone CLU/4727] (V9337)

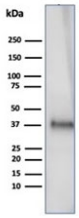
Catalog No.	Formulation	Size
V9337-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V9337-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V9337SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

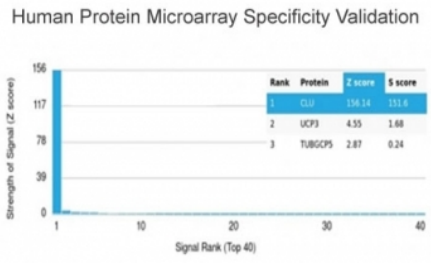
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	CLU/4727
Purity	Protein A/G affinity
UniProt	P10909
Localization	Nucleus, Cytoplasm
Applications	Western blot: 2-4ug/ml Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This CLU Antibody / Cytoprotective Stress Response Marker is available for research use only.



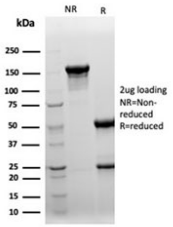
CLU Antibody Adrenal Gland IHC. Immunohistochemistry analysis of FFPE human adrenal gland tissue using CLU antibody. The mouse monoclonal antibody clone CLU/4727 demonstrates cytoplasmic staining in glandular cells, consistent with Clusterin / CLU expression as a cytoprotective stress response marker. Signal is observed within adrenal cortical cell populations, reflecting stress-associated upregulation of this secreted chaperone protein, while surrounding stromal elements show lower staining. HIER: boil tissue sections in 10 mM Tris with 1 mM EDTA, pH 9, for 20 min followed by cooling prior to staining.



CLU Antibody Testis WB. Western blot analysis of human testis tissue lysate using CLU antibody. The mouse monoclonal antibody clone CLU/4727 detects bands at approximately 75-80 kDa and lower molecular weight bands around 34-39 kDa, consistent with the predicted molecular weight of full-length Clusterin / CLU and its processed alpha and beta subunits. This banding pattern reflects proteolytic cleavage and glycosylation of this secreted chaperone protein, supporting its role as a cytoprotective stress response marker in western blot analysis.



CLU Antibody Protein Microarray Specificity Validation. Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using CLU antibody. The mouse monoclonal antibody clone CLU/4727 shows a strong and specific signal for Clusterin / CLU, with a high Z-score and clear separation from non-target proteins, supporting its specificity as a cytoprotective stress response marker. The Z-score reflects signal intensity above background, while the S-score indicates the degree of separation from the next highest signal, confirming selective binding to the intended target.



SDS-PAGE analysis of purified, BSA-free CLU antibody (clone CLU/4727) as confirmation of integrity and purity.

Description

Clusterin (CLU) is a secreted glycoprotein that plays a central role in cellular stress response and cytoprotection by acting as a molecular chaperone that stabilizes damaged proteins. CLU antibody is widely used to study stress-induced expression of this protein, which is strongly upregulated under conditions such as oxidative stress, inflammation, hypoxia, and apoptosis. This inducible expression pattern makes Clusterin a sensitive marker of cellular stress and survival signaling pathways.

CLU Antibody / Cytoprotective Stress Response Marker, also known as Clusterin antibody, APO-J antibody, or Apolipoprotein J antibody in the literature, enables detection of this protein in pathways associated with stress adaptation and cellular defense. In contrast to its baseline physiological role, CLU expression is markedly increased during cellular stress, where it functions to limit damage and promote recovery. This dynamic regulation distinguishes it from constitutively expressed chaperones and underpins its value as a stress response marker.

Functionally, CLU inhibits protein aggregation and supports clearance of misfolded proteins, thereby reducing proteotoxic stress and preserving cellular integrity. It also interacts with apoptosis-regulating pathways, contributing to suppression of programmed cell death and enhancement of cell survival. In cancer biology, elevated CLU expression has been associated with tumor progression, resistance to chemotherapy, and adaptation to hostile microenvironments. CLU Antibody is therefore particularly useful in studies of tumor biology, treatment resistance, and stress-induced survival mechanisms.

Beyond intracellular effects, secreted CLU influences the extracellular environment by stabilizing proteins and modulating immune responses. Its interactions with complement components and inflammatory mediators contribute to tissue remodeling and immune regulation under stress conditions. This dual intracellular and extracellular activity reinforces its role as a key mediator of stress response at both the cellular and tissue levels.

Subcellularly, CLU is synthesized in the endoplasmic reticulum and processed through the secretory pathway before being released into the extracellular space. During stress conditions, both intracellular accumulation and secretion may increase, resulting in enhanced detection in western blot and immunohistochemistry assays. This often manifests as increased signal intensity and multiple detectable forms due to glycosylation and processing.

This CLU antibody is supported by immunohistochemistry and western blot data demonstrating detection of Clusterin in relevant biological samples, along with protein microarray specificity validation confirming selective binding. Together, these features support its use in studies of stress response, apoptosis regulation, and cytoprotective signaling.

This antibody is part of a broader range of Clusterin antibody products supporting research into chaperone function, stress response, and disease biology.

Application Notes

Optimal dilution of the CLU Antibody / Cytoprotective Stress Response Marker should be determined by the researcher.

Immunogen

A portion of amino acids 185-287 was used as the immunogen for the CLU antibody.

Storage

Aliquot the CLU antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

Clusterin antibody, APO-J antibody, Apolipoprotein J antibody, CLU protein antibody, Stress response clusterin antibody

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