

PRODUCT INFORMATION



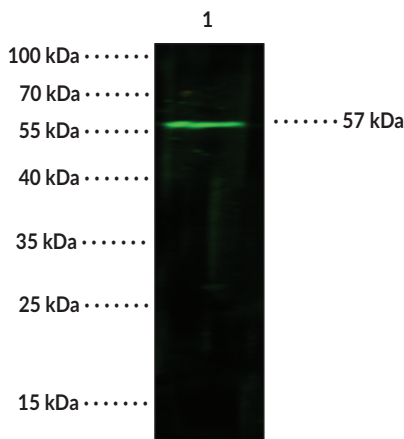
Clusterin Monoclonal Antibody

Item No. 37066

Overview and Properties

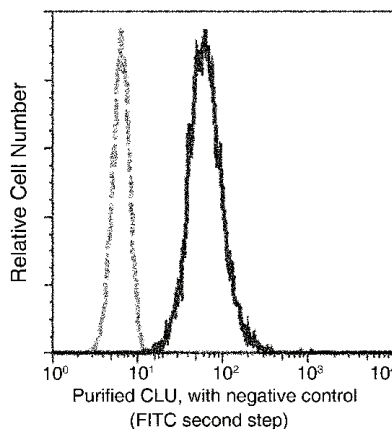
Contents:	This vial contains 50, 100, or 200 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	Apolipoprotein J, ApoJ, Ku70-binding Protein 1, SGP-2, Sulfated Glycoprotein 2, Testosterone-repressed Prostate Message 2, TRPM-2
Immunogen:	Recombinant human clusterin
Cross Reactivity:	(+) Clusterin
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-80°C (as supplied)
Stability:	≥1 year
Storage Buffer:	0.2 µm filtered solution in PBS
Clone:	9E2E2
Host:	Mouse
Isotype:	IgG1
Applications:	Flow Cytometry (FC), Immunohistochemistry (ICC), Immunofluorescence (IF), Western blot (WB), and ELISA; the recommended starting concentration is 1:100-1:500 for ICC/IF, 1:100-1:500 for FC, 1:500-1:1,000 for WB, and 1:5,000-1:10,000 for ELISA. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Clusterin Monoclonal Antibody at a 1:500 dilution.

Lane 1: HeLa whole cell lysates (30 µg)



Flow cytometric analysis of human CLU expression on A549 cells. The cells were treated according to the manufacturer's manual (BD Pharmingen), stained with Clusterin Monoclonal Antibody, then visualized with a FITC-conjugated secondary antibody. The fluorescence histograms were derived from gated events with the forward and side light-scatter characteristics of intact cells.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

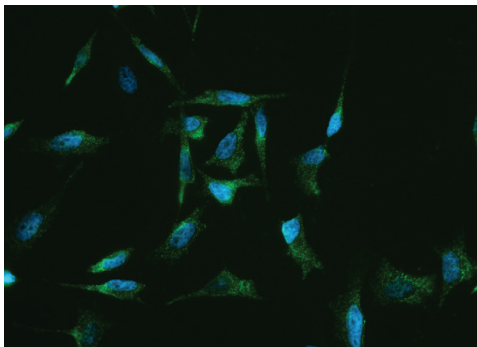
SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Immunofluorescent staining of human CLU in HeLa cells. The positive cytoplasm staining was visualized in green with Cayman's Clusterin Monoclonal Antibody (Item No. 37066).

Description

Clusterin is a secreted heterodimeric glycoprotein.¹ It is proteolytically processed to remove a signal peptide and cleave the α and β chains.^{1,2} This cleavage creates small- and medium-sized isoforms found in the nucleus or cytosol and mitochondria, respectively, and a large-sized isoform composed of α - and β chains linked *via* disulfide bonds near the center that is secreted outside the cell.¹ Clusterin is ubiquitously expressed in tissues and found in physiological fluids. It is a multifunctional protein involved in a wide range of processes, including immune modulation, autophagosome formation, apoptosis, and extracellular matrix remodeling, among others.³ Clusterin is upregulated by cellular stress and acts as an extracellular chaperone and scavenger to prevent protein aggregation. SNPs in *CLU*, the gene encoding clusterin, are associated with a higher rate of cognitive decline in patients with mild cognitive decline or Alzheimer's disease.⁴ Clusterin is also associated with inflammatory and cardiovascular diseases, where it has either protective or detrimental effects.¹ Cayman's Clusterin Monoclonal Antibody can be used for flow cytometry (FC), ELISA, immunocytochemistry (ICC), immunofluorescence (IF), and Western blot (WB) applications.

References

1. Jones, S.E. and Jomary, C. Molecules in focus: Clusterin. *Int. J. Biochem. Cell Biol.* **34**(5), 427-31 (2002).
2. Rodríguez-Rivera, C., Garcia, M.M., Molina-Álvarez, M., *et al.* Clusterin: Always protecting. Synthesis, function and potential issues. *Biomed. Pharmacother.* **134**, 111174 (2021).
3. Rohne, P., Prochnow, H., and Kock-Brandt, C. The CLU-files: Disentanglement of a mystery. *Biomol. Concepts* **7**(1), 1-15 (2016).
4. Thambisetty, M., Beason-Held, L.L., An, Y., *et al.* Alzheimer risk variant CLU and brain function during aging. *Biol. Psychiatry* **73**(5), 399-405 (2013).

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