

Datasheet for ABIN1672832

**Clusterin ELISA Kit**[Go to Product page](#)**1** Image**3** Publications

## Overview

Quantity:	96 tests
Target:	Clusterin (CLU)
Binding Specificity:	AA 23-227, AA 228-449
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	0.78-50 ng/mL
Minimum Detection Limit:	0.78 ng/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Clusterin
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Saliva, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: D23-R227(beta)&S228-E449(alpha)
Specificity:	Expression system for standard: NSO Immunogen sequence: D23-R227(beta)&S228-E449(alpha)
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity: <20pg/mL

Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

## Target Details

Target: Clusterin (CLU)

Alternative Name: CLU ([CLU Products](#))

Background: Protein Function: Isoform 1 functions as extracellular chaperone that prevents aggregation of nonnative proteins. Prevents stress- induced aggregation of blood plasma proteins. Inhibits formation of amyloid fibrils by APP, APOC2, B2M, CALCA, CSN3, SNCA and aggregation-prone LYZ variants (in vitro). Does not require ATP. Maintains partially unfolded proteins in a state appropriate for subsequent refolding by other chaperones, such as HSPA8/HSC70. Does not refold proteins by itself. Binding to cell surface receptors triggers internalization of the chaperone-client complex and subsequent lysosomal or proteasomal degradation. Secreted isoform 1 protects cells against apoptosis and against cytolysis by complement. Intracellular isoforms 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. Promotes proteasomal degradation of COMMD1 and IKBKB. Modulates NF-kappa-B transcriptional activity. Nuclear isoforms promote apoptosis. Mitochondrial isoforms suppress BAX-dependent release of cytochrome c into the cytoplasm and inhibit apoptosis. Plays a role in the regulation of cell proliferation. .

Background: Clusterin(apolipoprotein J) is a 75 - 80 kDa disulfide-linked heterodimeric protein associated with the clearance of cellular debris and apoptosis.[1] In humans, clusterin is encoded by the CLU gene.This protein has several Synonyms: dimeric acidic glycoprotein(DAG protein), testosterone repressed prostate message-2(TRPM-2), sulfated glycoprotein-2(SGP-2) and complement lysis inhibitor(CLI). Clusterin was mapped to mouse chromosome 14.

Clusterin is a ubiquitously expressed molecule thought to influence a variety of processes including cell death. In the brain, it accumulates in dying neurons following seizures and hypoxic-ischemic(H-I) injury. clusterin may be a new therapeutic target to modulate non-caspase-dependent neuronal death following acute brain injury.

Synonyms: Clusterin,Aging-associated gene 4 protein,Apolipoprotein J,Apo-J,Complement cytolysis inhibitor,CLI,Complement-associated protein SP-40,40,Ku70-binding protein

## Target Details

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,AAG4,  
Full Gene Name: Clusterin  
Cellular Localisation: Isoform 1: Secreted. Can retrotranslocate from the secretory compartments to the cytosol upon cellular stress.

Gene ID: 1191

UniProt: [P10909](#)

Pathways: [Apoptosis](#), [Negative Regulation of intrinsic apoptotic Signaling](#)

## Application Details

Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

Comment: Sequence similarities: Belongs to the clusterin family.  
Tissue Specificity: 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. .

Plate: Pre-coated

Protocol: human Clusterin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Clusterin has been precoated onto 96-well plates. Standards(NSO, D23-R227( $\beta$ )&S228-E449( $\alpha$ )) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Clusterin is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Clusterin amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 50 ng/mL, 25 ng/mL, 12.5 ng/mL, 6.25 ng/mL, 3.12 ng/mL, 1.56 ng/mL, 0.78 ng/mL human Clusterin standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA), saliva

## Application Details

or urine to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human Clusterin standard solution and each sample is measured in duplicate.

Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(ng/ml): 5.62, Standard deviation: 0.259, CV(%): 4.6</li><li>• Sample 2: n=16, Mean(ng/ml): 10.1, Standard deviation: 0.444, CV(%): 4.4</li><li>• Sample 3: n=16, Mean(ng/ml): 25.5, Standard deviation: 1.07, CV(%): 4.2,</li><li>• Sample 1: n=24, Mean(ng/ml): 6.23, Standard deviation: 0.467, CV(%): 7.5</li><li>• Sample 2: n=24, Mean(ng/ml): 12.1, Standard deviation: 0.835, CV(%): 6.9</li><li>• Sample 3: n=24, Mean(ng/ml): 26.4, Standard deviation: 1.95, CV(%): 7.4</li></ul>
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Restrictions:	For Research Use only
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## Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
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Storage:	-20 °C, 4 °C
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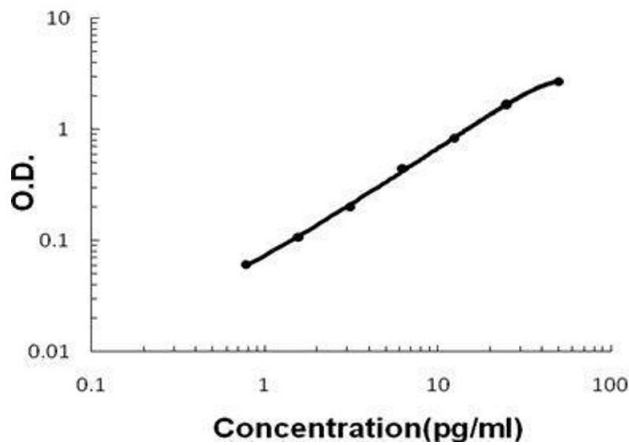
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
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Expiry Date:	12 months
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## Publications

Product cited in:	<p>Kim, Song, Kim, Jeon, Kim, Kang, Chun, Hong, Chung, Kim, Kim, Kim: "Urine clusterin/apolipoprotein J is linked to tubular damage and renal outcomes in patients with type 2 diabetes mellitus." in: <b>Clinical endocrinology</b>, Vol. 87, Issue 2, pp. 156-164, (2018) (<a href="#">PubMed</a>).</p> <p>Song, Zhang, Zhang, Du, Guo, Kuang, Wang, Wu, Zou, Zou, Lv, Wang: "A microfluidic device for studying chemotaxis mechanism of bacterial cancer targeting." in: <b>Scientific reports</b>, Vol. 8, Issue 1, pp. 6394, (2018) (<a href="#">PubMed</a>).</p> <p>Zheng, Yao, Qian, Sai, Qiu, Yang, Wu, Dong, Yao: "Oncogenic secretory clusterin in hepatocellular carcinoma: Expression at early staging and emerging molecular target." in: <b>Oncotarget</b>, Vol. 8, Issue 32, pp. 52321-52332, (2017) (<a href="#">PubMed</a>).</p>
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# Human Clusterin ELISA Kit



## ELISA

**Image 1.** Human Clusterin PicoKine ELISA Kit standard curve