

## Clusterin Rat, Rabbit Polyclonal Antibody

### Product Data Sheet

**Source of Antigen:** *E. coli*

**Host:** Rabbit

**Cat. No.:**

RD381034100

(0.1 mg)

**Other names:** Apolipoprotein J, Apo J

### Research topic

Animal studies, Oncology, Others, Renal disease, Sepsis

### Preparation

The antibody was raised in rabbits by immunization with the recombinant Rat Clusterin.

### Amino Acid Sequence

The immunization antigen (26.5 kDa) is a protein containing 240 AA of recombinant Rat Clusterin. N-Terminal T7-Tag and C-Terminal His-tag, 25 extra AA (highlighted).

**MASMTGGQQM GRDPNSSSPF** YFWMNGDRID SLLESDRQQS QVLDAMQDSF TRASGIIDTL FQDRFFTHEP QDIHHFSPMG  
FPHKRPHLLY PKSRLVRSML PLSHYGPLSF HNMFPFFDM IHQAQQAMDV QLHSPALQFP DVDFLKEGED DRTVCKEIRH  
NSTGCLKMKG QCEKCQEILS VDCSTNNPAQ ANLRQELNDS LQVAERLTQQ YNELLHSLQS KMLNTSSLLE **QALEHHHHHH**

The amino acid sequence of the recombinant Rat Clusterin is 100% homologous to the amino acid sequence (AA 146-360) of the Rat Clusterin precursor.

### Purification Method

Immunoaffinity chromatography on a column with immobilized recombinant Rat Clusterin.

### Antibody Content

0.1 mg (determined by BCA method, BSA was used as a standard)

### Formulation

The antibody is lyophilized in 0.05 M phosphate buffer, 0.1 M NaCl, pH 7.2. **AZIDE FREE.**

### Reconstitution

We advise you to centrifuge this product vial before use. Add 0.1 ml of deionized water, mix gently and let the lyophilized pellet dissolve completely (at least 15 minutes with occasionally gently shaking, not to foam). Slight turbidity may occur after reconstitution, which does not affect activity of the antibody. In this case clarify the solution by centrifugation.

### Storage/Stability

The lyophilized antibody remains stable and fully active until the expiry date when stored at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles and store frozen at -80°C. Reconstituted antibody can be stored at 4°C for a limited period of time; it does not show decline in activity after one week at 4°C.

### Expiration

See vial label.

### Lot Number

See vial label.

### Quality Control Test

Indirect ELISA - to determine titer of the antibody

SDS PAGE - to determine purity of the antibody

### Applications

## Introduction to the Molecule

Clusterin is a 75-80 kD disulfide-linked heterodimeric protein containing about 30% of N-linked carbohydrate rich in sialic acid, but truncated forms targeted to the nucleus have also been identified.

The precursor polypeptide chain is cleaved proteolytically to remove the 22-mer secretory signal peptide and subsequently between residues 227/228 to generate the alpha and beta chains. These are assembled anti-parallel to give a heterodimeric molecule in which the cysteine-rich centers are linked by five disulfide bridges and are flanked by two predicted coiled-coil alpha-helices and three predicted amphipathic alpha-helices. The six sites of N-linked glycosylation are indicated as yellow spots.

Across a broad range of species clusterin shows 70% to 80% of sequence homology. It is ubiquitously expressed in most mammalian tissues and can be found in plasma, milk, urine, cerebrospinal fluid and semen.

It is able to bind and form complexes with numerous partners such as immunoglobulins, lipids, heparin, bacteria, complement components, paraoxonase, beta amyloid, leptin and others. Clusterin has been ascribed a plethora of functions such as phagocyte recruitment, aggregation induction, complement attack prevention, apoptosis inhibition, membrane remodelling, lipid transport, hormone transport and/or scavenging, matrix metalloproteinase inhibition.

A detailed mechanism of clusterin has not been defined. One tempting hypothesis says that clusterin is an extracellular chaperone protecting cells from stress induced by degraded and misfolded protein precipitates. Clusterin is up- or downregulated on the mRNA or protein level in many pathological and clinically relevant situations including cancer, organ regeneration, infection, Alzheimer disease, retinitis pigmentosa, myocardial infarction, renal tubular damage, autoimmunity and others.

## References to this Product

- Zhang F, Sha J, Wood TG, Galindo CL, Garner HR, Burkart MF, Suarez G, Sierra JC, Agar SL, Peterson JW, Chopra AK. *Alteration in the activation state of new inflammation-associated targets by phospholipase A(2)-activating protein (PLAA)*. Cell Signal. 2008 May;20 (5):844-61

## Note

This product is for research use only.

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