Clusterin Human,
Mouse Monoclonal Antibody, Clone: Hs-3

Product Data Sheet

Source of Antigen: The antibody was prepared against Triton X-100 human sperm extract.
Host: Mouse
Isotype: IgG1

Other names: Apolipoprotein J, Apo J

Cat. No.:
RD182034110-H3 (0.1 mg)

Research topic
Animal studies, Others, Renal disease, Sepsis

Preparation
The antibody is a mouse monoclonal antibody against Human Clusterin.

Species Reactivity
Human
Does not react with: Cat, Dog, Bovine
Not yet tested in other species.

Purification Method
Affinity chromatography on a column with immobilized protein A-Sepharose followed by DEAE-chromatography.

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; 15 mM SODIUM AZIDE.

Reconstitution
Add 0.1 ml of deionized water and let the lyophilized pellet dissolve completely. 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 fter 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
SDS PAGE - to determine purity of the antibody

Applications
ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western blotting

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.Clus-terin 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 A2-activating protein (PLAA).* Cell Signal. 2008 May;20 (5):844-61
- Zenkel M, Kruse FE, Junemann AG, Naumann GO, Schlotzer-Schrehardt U . *Clusterin deficiency in eyes with pseudoexfoliation syndrome may be implicated in the aggregation and deposition of pseudoexfoliative material.* Invest Ophthalmol Vis Sci . May;47(5):1982-90 (2006)
- Schlotzer-Schrehardt U, Pasutto F, Sommer P, Hornstra I, Kruse FE, Naumann GO, Reis A, Zenkel M. *Genotype-correlated expression of lysyl oxidase-like 1 in ocular tissues of patients with pseudoexfoliation syndrome/glaucoma and normal patients.* Am J Pathol. 2008 Dec;173 (6):1724-35

Note

This product is for research use only.

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