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Clusterin Human

Clusterin Human Recombinant
CYK0112

Product Overview

Name	Clusterin Human
Description	
Clusterin Human Recombinant	
Accession (Primary)	P10909
Synonyms	
CLI, AAG4, KUB1, SGP2, SGP-2, SP-40, TRPM2, MGC24903, Clusterin, Apolipoprotein J, Apo-J.	
Introduction	
Clusterin also named Apolipoprotein J (APO-J) 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 a and b chains. These are assembled in 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 a-helices and three predicted amphipathic a-helices. Across a broad range of species clusterin shows a high degree of sequence homology ranging from 70% to 80%. It is nearly 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, 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 remodeling, lipid transport, hormone transport and/or scavenging, matrix metalloproteinase inhibition. A genuine function of clusterin has not been defined. One tempting hypothesis says that clusterin is an extracellular chaperone protecting cells from stress induced insults caused by degraded and misfolded protein precipitates. Clusterin is up- or down regulated 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.	
Source	
293 cell line (Human embryonic kidney).	
Physical Appearance	
Filtered, White, Lyophilized powder.	
Formulation	

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Filtered (0.4 micron) and lyophilized PBS, pH 7.5.

Stability

Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C.

Purity

Greater than 95% as determined by SDS PAGE.

Amino acid sequence

DQTVSDNELQ EMSNQGSKYV NKEIQNAVNG VKQIKTLIEK TNEERKTLLS NLEEAKKKKE DALNETRESE TKLKELPGVC NETMMALWEE CKPCLKQTCM KFYARVCRSGS GLVGRQLEE FLNQSSPFYF WMNGDRIDSL LENDRQQTHM LDVMQDHFSRA SSIIDELFQ DRFFTREPQD TYHYLPFSLP HRRPHFFFPK SRIVRSLMPF SPYEPLNFHA MFQPFLEMIH EAQQAMDIHF HSPAFQHPPT EFIREGDDDR TVCREIRHNS TGCLRMKDQC DKCREILSVD CSTNNPSQAKLRRELDESLQ VAERLTRKYN ELLKSYQWKM LNTSSLLEQL NEQFNWVSRL ANLTQGEDQYYLRVTTVASH TSDSDVPSGV TEVVVKLFDS DPITVTVPVE VSRKNPKFME TVAEKALQEY RKKHREE AAA DYKDDDDK .

Solubility

Add deionized water to prepare a working stock solution of approximately 0.5mg/ml and let the lyophilized pellet dissolve completely. Product not sterile! Please filter the product by an appropriate sterile filter before using it in cell culture.

References

1. Tiltle: Clusterin Facilitates Exchange of Glycosyl Phosphatidylinositol-Linked SPAM1 Between Reproductive Luminal Fluids and Mouse and Human Sperm Membranes1. Publication :BIOLOGY OF REPRODUCTION 81, 562–570 (2009) Published online before print 8 April 2009. DOI 10.1095/biolreprod.108.075739 Link : Clusterin prospec publication 2. Tiltle: Mass spectrometry quantification of clusterin in the human brain. Publication :2012 Chen et al.; licensee BioMed Central Ltd. This is an Open Access article distributed under the terms of the CreativeCommons Attribution License (http://creativecommons.org/licenses/by/2.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. Link : Clusterin Human prospec publication

Precautions

Clusterin Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (P10909)