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Clusterin Human

Description: The Clusterin Human contains a total 438 amino acids and a calculated molecular mass of 51.27kDa (calculated). The AA sequence (AA 1-427) is identical to Swiss-Prot-P10909 (AA 23-449, secreted Human Clusterin). C-terminal Flag-tag 11 extra AA (underlined).

Synonyms:CLI, AAG4, KUB1, SGP2, SGP-2, SP-40, TRPM2, MGC24903, Clusterin, Apoliprotein J, Apo-J.

Source:293 cell line (Human embryonic kidney).

Physical Appearance: Filtered, White, Lyophilized powder.

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 EA

Purity: Greater than 95% as determined by SDS PAGE.

Formulation:
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.

Usage:
NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drμgs, agricultural or pesticidal products, food additives or household chemicals.

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.

Introduction:
Clusterin also named Apoliprotein 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, 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 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.

Catalog #:CYPS-285

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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, 562570 (2009) Published online before print 8 April 2009. DOI 10.1095/biolreprod.108.075739Link:http://www.biolreprod.org/content/81/3/562.full.pdf2. 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:http://link.springer.com/content/pdf/10.1186%2F1750-1326-7-41.pdf

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