



Apolipoprotein J, FLAG Tag, human recombinant (rHuAPO-J-FLAG)

Catalog No: 94911
Lot No: XXXXX
Source: HEK293
Synonyms: CLI, AAG4, KUB1, SGP2, SGP-2, SP-40, TRPM2, MGC24903, Clusterin, Apolipoprotein J, Apo-J

Background

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 α -helices and three predicted amphipathic α -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.

Description

Clusterin human contains a total 438 amino acids and has a calculated molecular mass of 51.27 kDa. The amino acid sequence (1-427) is identical to Swiss-Prot-P10909 (aa 23-449, secreted human Clusterin). The protein is fused with a C-terminal FLAG Tag (11 extra amino acids).

Physical Appearance

Filtered white lyophilized powder.

Formulation

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

Solubility

Add deionized water to prepare a working stock solution of approximately 0.5 mg/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.

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.

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Amino Acid Sequence

DQTVSDNELQ EMSNQGSKYV NKEIQNAVNG VKQIKTLIEK TNEERKTLLS NLEEAKKKKE DALNETRESE TKLKELPGVC
NETMMALWEE CKPCLKQTCM KFYARVCRSG SGLVGRQLEE FLNQSSPFYF WMNGDRIDSL LENDRQQTHM LDVMQDHFSR
ASSIIDELFQ DRFFTREPQD TYHYLPFSLP HRRPHFFFPK SRIVRSLMPF SPYEPLNFHA MFQPFLEMIH EAQQAMDIHF
HSPAFQHPPT EFIREGDDDR TVCREIRHNS TGCLRMKDQC DKCREILSVD CSTNNPSQAK LRRELDLQ VAERLTRYN
ELLKSYQWKM LNTSSLLEQL NEQFNWVSRL ANLTQGEDQY YLRVTTVASH TSDSDVPSGV TEVVVKLFDS DPITVTVPVE
VSRKNPKFME TVA EKALQEY RKKHREEAAA DYKDDDDK

Usage

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