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Clusterin Rat

Description: The Clusterin Rat was constructed as a recombinant protein with N-terminal fusion of T7-Tag (16AA) and C-terminal fusion of His-Tag (9AA). The Clusterin Rat His-Tagged Fusion Protein, produced in E.coli, is 26.5 kDa protein containing 215 amino acid residues of the APO-J Rat and 25 additional amino acid residues His-Tag, T7-Tag (underlined).

Synonyms:CLI, AAG4, KUB1, SGP2, SGP-2, SP-40, TRPM2, MGC24903, Complement-associated protein SP-40,40, Complement cytolysis inhibitor, NA1/NA2, Apoliprotein J, Apo-J, Testosterone-repressed prostate message 2, TRPM-2.

Source: Escherichia Coli.

Physical Appearance: White lyophilized (freeze-dried) powder.

Amino Acid Sequence:MASMTGGQQM GRDPNSSSPF YFWMNGDRID SLLESDRQQS QVLDAMQDSF TRASGIIDTL FQDRFFTHEPQDIHHFSPMG FPHKRPHLLY PKSRLVRSLM PLSHYGPLSF HNMFQPFFDM IHQAQQAMDV QLHSPALQFPDVDFLKEGED DRTVCKEIRH NSTGCLKMKG QCEKCQEILS VDCSTNNPAQ ANLRQELNDS LQVAERLTQQYNELLHSLQS KMLNTSSLLE QALEH

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

Formulation:
Lyophilized from 0.5 mg/ml in 0.01M Tris pH 7.2.

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 0.2 ml of deionized H2O and let the lyophilized pellet dissolve completely.

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.

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