

## 32-1049: Clusterin His Recombinant Protein

**Alternative Name :** CLI,AAG4,APOJ,KUB1,SGP2,SGP-2,SP-40,TRPM2,TRPM-2,MGC24903,Clusterin,ging-associated gene 4 protein,Apolipoprotein J,Complement cytolysis inhibitor,Complement-associated protein SP-40,40,Ku70-binding protein 1,NA1/NA2,Testosterone-repr

### Description

Source : Escherichia Coli. Clusterin Human Recombinant produced in E.Coli is a single, non-glycosylated polypeptide chain containing 463 amino acids (23-449 a.a.) and having a molecular mass of 54.1kDa. Clusterin is fused to a 36 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques. 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  $\alpha$ -helices and three predicted amphipathic  $\alpha$ -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.

### Product Info

**Amount :** 20  $\mu$ g  
**Purification :** Greater than 85% as determined by SDS-PAGE.  
**Content :** Clusterin protein solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl, 10% glycerol and 1mM DTT.  
**Storage condition :** Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.  
**Amino Acid :** MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSDQTV SDNELQEMSN QGSKYVNKEI  
QNAVNGVKQI KTLIEKTNEE RKTLLNLEE AKKKKEDALN ETRESETKLK ELPGVCNETM MALWEECKPC  
LKQTCMKFYA RVCRSGLV GRQLEEFNLQ SSPFYFWMNG DRIDSLEND RQQTHMLDVM  
QDHFSSRASSI IDELFQDRFF TREPQDTHYH LPFSLPHRRP HFFPKSRIV RSLMPFSPYE PLNFHAMFQP  
FLEMIHEAQQ AMDIHFHSPA FQHPTEFIR EGDDDRTVCR EIRHNSTGCL RMKDQCDKCR EILSVD CSTN  
NPSQAKLRRE LDESLQVAER LTRKYNELK SYQWKMLNTS SLLEQLNEQF NWSRLANLT QGEDQYYLRV  
TTVASHTSDS DVPSGVTEVV VKLFDSDPIT VTPVPEVSRK NPKFMETVAE KALQEYRKKH REE.

