# Product Data Sheet

| | |
|---|---|
| Product Name: | Clusterin Human, His |
| Cat. No.: | GP20062 |
| Batch No.: | 1 |

## Product Data

| | | | |
|---|---|---|---|
| Purity | >98% | Source | Escherichia Coli. |
| Phycical Appearance | solid | Shipping Condition | Shipped with Ice Packs. |
| Synonyms | 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-repressed prostate message 2; CLU. | | |
| Amino Acid Sequence | MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSDQTV SDNELQEMSN QGSKYVNKEI QNAVNGVKQI KTLIEKTNEE RKTLLSNLEE AKKKKEDALN ETRESETKLK ELPGVCNETM MALWEECKPC LKQTCMKFYA RVCRSGSGLV GRQLEEFLNQ SSPFYFWMNG DRIDSLLEND RQQTHMLDVM QDHFSRASSI IDELFQDRFF TREPQDTYHY LPFSLPHRRP HFFFPKSRIV RSLMPFSPYE PLNFHAMFQP FLEMIHEAQQ AMDIHFHSPA FQHPPTEFIR EGDDDRTVCR EIRHNSTGCL RMKDQCDKCR EILSVDCSTN NPSQAKLRRE LDESLQVAER LTRKYNELLK SYQWKMLNTS SLLEQLNEQF NWVSRLANLT QGEDQYYLRV TTVASHTSDS DVPSGVTEVV VKLFDSDPIT VTVPVEVSRK NPKFMETVAE KALQEYRKKH REE. | | |
| Formulation | Clusterin protein solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl, 10% glycerol and 1mM DTT. | | |

## 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


***Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com***
***Address: 10292 Central Ave. #205, Montclair, CA, USA***

## Product Data Sheet

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.

### Stability

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.

### Background

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.


***Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com***
***Address: 10292 Central Ave. #205, Montclair, CA, USA***