

## Product Information

### SILu™Lite CLU, Clusterin, human recombinant, expressed in HEK cells MS Protein Standard

Catalog Number **MSST0008**

Storage Temperature  $-20\text{ }^{\circ}\text{C}$

Synonyms: Testosterone-repressed prostate message 2 (TRPM-2), Apolipoprotein J

#### Product Description

SILu™Lite CLU is a recombinant human protein expressed in human 293 cells. It is a heterodimer of 2 subunits (alpha and beta) consisting of 464 amino acids (including C-terminal polyhistidine and V5 tags), with a calculated molecular mass of 54.1 kDa.

SILu™Lite CLU is an analytical standard designed to be used as starting material for preparation of calibrators and controls in LC-MS applications.

Clusterin is a secreted glycosylated, 80 kDa, disulfide-linked heterodimer of alpha and beta subunits (produced by internal cleavage). Clusterin is expressed in virtually all tissues and found in all human fluids.<sup>1</sup> It is involved in numerous physiological processes important for carcinogenesis and tumor growth, including antiapoptotic cell survival,<sup>2</sup> cell cycle regulation,<sup>3</sup> cell adhesion,<sup>4</sup> tissue remodeling,<sup>5</sup> and lipid transportation.<sup>6</sup> Clusterin also exists as a nuclear protein. The secreted form of clusterin has extracellular chaperone and antiapoptotic activities<sup>7</sup> while the nuclear form acts as a proapoptotic factor.<sup>8</sup>

Each vial contains 50–65  $\mu\text{g}$  of SILu™Lite CLU standard, lyophilized from a solution of phosphate buffered saline. Vial content was determined by the Bradford method using BSA as a calibrator. The correction factor from the Bradford method to Amino Acid Analysis is 70% for this protein.

Identity: Confirmed by peptide mapping

Purity:  $\geq 95\%$  (SDS-PAGE)

UniProt: P10909

#### Sequence Information

The C-terminal polyhistidine and V5 tags are italicized.

DQTVSDNELQEMSNQGSKYVNKEIQNAVNGVKQIKT  
LIEKTNEERKTLLSNLEEAKKKKEDALNETRESETKLLK  
ELPGVCNETMMALWEECKPCLKQTCMKFYARVCRS  
GSGLVGRQLEEFNLQSSPFYFWMNGDRIDSLEENDR  
QQTHMLDVMQDHFSTRASSIIDELFQDRFFFTREPQDTY  
HYLPFSLPHRRPHFFFPKSRIVRSLMPFSPYEPLNFH  
AMFQPFLEMIHEAQQAMDIIHFHSPAFQHPPTFEFIREG  
DDDRTVCREIRHNSTGCLRMKDQCDKCREILSVDCS  
TNNPSQAKLRRELDLQVAERLTKYNELLKSYQW  
KMLNTSSLLEQLNEQFNWVSRLANLTQGEDQYYLRV  
TTVASHTSDSDVPSGVTEVVVLFSDPITVTVPVEV  
SRKNPKFMETVAEKALQEYRKKHREE SDPSRGPFEFEG  
KPIP N P L L G L D S T R T G H H H H H H H G G Q

#### Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

#### Preparation Instructions

Briefly centrifuge the vial before opening. It is recommended to reconstitute the protein in sterile ultrapure water to a final concentration of 100  $\mu\text{g}/\text{mL}$ .

#### Storage/Stability

Store the lyophilized product at  $-20\text{ }^{\circ}\text{C}$ . The product is stable for at least 2 years as supplied. After reconstitution, it is recommended to store the protein in working aliquots at  $-20\text{ }^{\circ}\text{C}$ .

**References**

1. Aronow, B.J. et al., Apolipoprotein J expression at fluid-tissue interfaces: potential role in barrier cytoprotection. *Proc. Natl. Acad. Sci. USA.*, **15**, 725-729 (1993).
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4. Fratelli, M. et al., Role of clusterin in cell adhesion during early phases of programmed cell death in P19 embryonic carcinoma cells. *Biochim. Biophys. Acta*, **1311**, 71-76 (1996).
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6. Gelissen, I.C. et al., Apolipoprotein J (clusterin) induces cholesterol export from macrophage-foam cells: a potential anti-atherogenic function? *Biochem. J.*, **331**, 231-237 (1998).
7. Poon, S. et al., Clusterin is an ATP-independent chaperone with very broad substrate specificity that stabilizes stressed proteins in a folding-competent state. *Biochemistry*, **39**, 15953-15960 (2000).
8. Moretti, R.M. et al., Molecular mechanisms of the antimetastatic activity of nuclear clusterin in prostate cancer cells. *Int. J. Oncol.*, **39**, 225-34 (2011).

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