

Recombinant Mouse Clusterin Protein(Fc Tag)

Catalog Number: PDMM100107

Note: Centrifuge before opening to ensure complete recovery of vial contents.

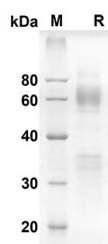
Description

Species	Mouse
Source	Mammalian-derived Mouse Clu Apoj Msgp-2 protein Glu22-Glu448, with an C-terminal Fc
Calculated MW	71.8 kDa
Observed MW	60-70 kDa
Accession	Q06890
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Mouse Clusterin proteins, 2 µg/lane of Recombinant Mouse Clusterin proteins was resolved with an SDS-PAGE under reducing conditions, showing bands at 71.8 KD

Background

Clusterin, also known as Apolipoprotein J, Sulfated Glycoprotein 2 (SGP-2), TRPM-2, and SP-40,40, is a secreted multifunctional protein that was named for its ability to induce cellular clustering. It binds a wide range of molecules and may function as a chaperone of misfolded extracellular proteins. It also participates in the control of cell proliferation, apoptosis, and carcinogenesis. Clusterin is predominantly expressed in adult testis, ovary, adrenal gland, liver, heart, and brain and in many epithelial tissues during embryonic development. Mouse Clusterin is synthesized as a precursor that contains two coiled coil domains, two nuclear localization signals (NLS), and one heparin binding domain. Intracellular cleavages of the precursor remove the signal peptide and generate comparably sized alpha and beta chains which are secreted as an 80 kDa N-glycosylated disulfide-linked heterodimer. Mature mouse Clusterin shares 77% and 93% amino acid sequence identity with an human and rat Clusterin, respectively. High µg/mL concentrations of Clusterin circulate predominantly as a component of high density lipoprotein particles, and these are internalized and degraded through interactions with an LRP-2/Megalin. In human, an alternately spliced 50 kDa isoform of Clusterin (nCLU) lacks the signal peptide and remains intracellular. This molecule is neither glycosylated nor cleaved into alpha and beta chains. In the cytoplasm, nCLU destabilizes the actin cytoskeleton and inhibits NF kappa B activation. Cellular exposure to ionizing radiation promotes the translocation of nCLU to the nucleus where it interacts with an Ku70 and promotes apoptosis. This function contrasts with an the cytoprotective effect of secreted Clusterin. During colon cancer tumor progression there is a downregulation of the intracellular form and an upregulation of the glycosylated secreted form.