

Human SELM / Selenoprotein M Protein (His Tag)

Catalog Number: 13508-H08E



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

SEPM; 1500040L08Rik; A230103K18; Sepm

Protein Construction:

A DNA sequence encoding the mature form of human SELM (Q8WWX9) (Ala 24-Leu 145) was fused with a polyhistidine tag at the C-terminus and an initial Met at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human SELM comprises 133 amino acids and has a calculated molecular mass of 15.4KDa. It migrates as an approximately 19 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 50mM NaCl, 50mM Arg, 0.3% Tween 20, 5% glycerol, pH 8.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

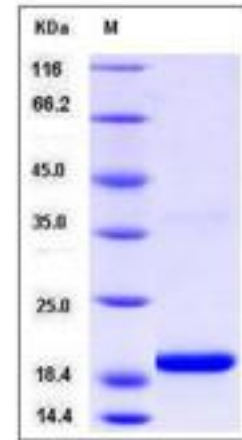
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Selenoprotein M is a selenoprotein, which contains a selenocysteine (Sec) residue at its active site. The selenocysteine M is encoded by the UGA codon that normally signals translation termination. The 3' UTR of selenoprotein genes have a common stem-loop structure, the sec insertion sequence (SECIS), that is necessary for the recognition of UGA as a Sec codon rather than as a stop signal. This gene is expressed in a variety of tissues, and the protein is localized to the perinuclear structures. Selenoprotein M May function as a thiol-disulfide oxidoreductase that participates in disulfide bond formation. This protein is widely expressed and is highly expressed in brain. It is found in Cytoplasm, perinuclear region, Endoplasmic reticulum, Golgi apparatus. Localized to perinuclear structures corresponding to Golgi and endoplasmic reticulum. Experiments results have suggested that selenoprotein M may have an important role in protecting against oxidative damage in the brain and may potentially function in calcium regulation.

References

- 1.Reeves MA, *et al.* (2010) The neuroprotective functions of selenoprotein M and its role in cytosolic calcium regulation. *Antioxid Redox Signal.* 12(7): 809-18.
- 2.Lu W, *et al.* (2012) Reproductive function of Selenoprotein M in Chinese mitten crabs (*Eriocheir sinensis*). *Peptides.* 34(1): 168-76.
- 3.Garcia-Triana A, *et al.* (2010) Expression and silencing of Selenoprotein M (SelM) from the white shrimp *Litopenaeus vannamei*: effect on peroxidase activity and hydrogen peroxide concentration in gills and hepatopancreas. *Comp Biochem Physiol A Mol Integr Physiol.* 155(2): 200-4.

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