

Product Information

Gelsolin from bovine plasma

Catalog Number **G8032**
Storage Temperature $-20\text{ }^{\circ}\text{C}$

Synonym: Brevin^{1,2}

Product Description

Gelsolin is a major calcium-dependent and phospholipid-dependent regulatory protein for actin transformation from the gel form to the soluble form in mammalian lung macrophages.³⁻⁵

Physical properties of brevin (gelsolin) isolated from bovine serum have been reported as follows:²

Molecular mass:

- ~68-69 kDa (sedimentation equilibrium)
- ~74 kDa (non-denaturing gel electrophoresis)

Stokes radius: 3.4 nm

Sedimentation coefficient:

- 4.9 S (in the absence of Ca^{2+})
- 4.4 S (in the presence of Ca^{2+})

Frictional ratio

- 1.26 (in the absence of Ca^{2+})
- 1.38 (in the presence of Ca^{2+})

The gelsolin protein is composed of six regions. Region one was originally described as an N-terminal 17 kDa chymotryptic fragment (CT14N) that retained some actin binding functions.⁶ Region two (G2) contains a phospholipid binding domain and an F-actin binding site with actin filament capping activity.⁷ The third, fifth, and sixth regions are of unknown function. The fourth region is similar to region one.⁸

This product is supplied as a lyophilized powder containing Trizma® buffer salt, NaCl, and EGTA. The approximate concentrations are 80% NaCl, 10% Trizma, and 3% EGTA.

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

Specific Activity: 20–100 units/mg protein

Unit Definition: One unit will reduce the viscosity difference between an actin solution and buffer by 50% in a 1 mL reaction containing 1-2 mg F-actin, 0.15 M KCl, 20 mM Trizma, pH 7.6, 0.2 mM CaCl_2 , 0.2 mM ATP, and 1 mM DTT at $28\text{ }^{\circ}\text{C}$.

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

Gelsolin is soluble in 50 mM imidazole (10 mg/mL).

References

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