

DATASHEET

Gelsolin (cytoplasmic)

From porcine smooth muscle
(>90% purity)

Cat. #: 8304-02
Quantity: 250µg

For Use in Research Only.
Not for Use in Diagnostic Processes.

Product Description

Cytoplasmic gelsolin has a molecular mass of ~80kD and consists of six homologous subdomains (S1-S6). Gelsolin is a Ca⁺⁺-dependent lipid binding actin regulatory protein, possessing three different actin modulating activities: severing of F-actin, nucleation of actin polymerization and capping of filaments barbed end. Gelsolin has three actin binding sites, two high affinity Ca⁺⁺ binding sites and two binding sites for PIP₂.

The protein concentration of gelsolin was determined by Biuret and the purity by scanning densitometry from Coomassie G-250 stained SDS-Gels. Lyophilized gelsolin (50µg) contains 10mM imidazole pH 7.0, 0.2mM DTT, 0.2mM EGTA, 2mM NaN₃ and 1% disaccharides, when reconstituted with 50µl H₂O.

The fragmentation activity of gelsolin was determined by Ostwald viscometry at 25°C. The specific viscosity of F-actin (1mg/ml) is reduced by ~70% after addition of gelsolin at a molar ratio of 1:100 (GS:A) after 30min. For this purpose the gelsolin stock solution was used as described below containing 1% disaccharides. F-actin containing 100mM KCl, 10mM Imidazole pH 7.4, 1mM ATP was mixed with 0.2mM CaCl₂ (final concentration) prior to the addition of gelsolin.

Product Handling

Preparation of a working stock

Add 250µl H₂O to the tube with gelsolin to obtain a 1mg/ml stock. Allow the protein to rehydrate for 2min and use a pipette to dissolve. Depending on the purpose this stock solution is ready-to-use. For critical assays we recommend buffer exchange against 10mM imidazole pH 7.0, 0.2mM DTT, 0.2mM EGTA and 2mM NaN₃.

Product Storage and Stability

Store the product at -70° upon arrival, where it will be stable for at least 6 months. Once dissolved, gelsolin is kept on ice and should be used within 5 days. For long term storage aliquots of e.g. 20µl are prepared from the freshly reconstituted protein. Flash freeze in liquid nitrogen and store aliquots at -70°C.

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