

APA372Mu01 100μg Active Gelsolin (GSN)

Organism Species: Mus musculus (Mouse)

Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Prokaryotic expression.

Host: E. coli

Residues: Ala432~Ser625 Tags: N-terminal His-tag

Purity: >90%

Endotoxin Level: <1.0EU per 1µg (determined by the LAL method).

Buffer Formulation: PBS, pH7.4, containing 0.01% Sarcosyl, 5%Trehalose.

Original Concentration: 200µg/mL

Applications: Activity Assays.

(May be suitable for use in other assays to be determined by the end user.)

Predicted isoelectric point: 8.0

Predicted Molecular Mass: 24.2kDa

Accurate Molecular Mass: 27kDa as determined by SDS-PAGE reducing conditions.

[<u>USAGE</u>]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.

Store at 2-8°C for one month.

Aliquot and store at -80°C for 12 months.



Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

AAQHGMDDD GTGQKQIWRI

EGSNKVPVDP ATYGQFYGGD SYIILYNYRH GGRQGQIIYN WQGAQSTQDE VAASAILTAQ LDEELGGTPV QSRVVQGKEP AHLMSLFGGK PMIIYKGGTS RDGGQTAPAS IRLFQVRASS SGATRAVEVM PKSGALNSND AFVLKTPSAA YLWVGAGASE AEKTGAQELL KVLRS

[ACTIVITY]

Gelsolin (GSN) is a ubiquitous, multifunctional actin-binding protein that plays a pivotal role in remodeling the cytoskeleton by severing, capping, and nucleating actin filaments. This calcium-dependent regulation is essential for critical cellular processes including cell motility, shape changes, and the clearance of cellular debris post-injury. By controlling the dynamics of actin assembly and disassembly, GSN influences a wide range of physiological functions from wound healing to platelet activation. Importantly, GSN directly binds to ACTC1, the primary actin isoform in cardiac muscle, to regulate the contractile apparatus and maintain heart function. To detect the activity of recombinant GSN, a functional ELISA assay was performed to evaluate the interaction between recombinant mouse GSN and recombinant human ACTC1.Briefly, GSN was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 $\,\mu$ I were then transferred to ACTC1-coated microtiter wells and incubated for 1h at 37 °C. Wells were washed with PBST and incubated for 1h with anti-GSN pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37°C, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 °C. Finally, add 50 μL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant mouse

GSN and recombinant human ACTC1 was shown in Figure 1, the EC50 for this effect is $0.38\mu g/mL$.

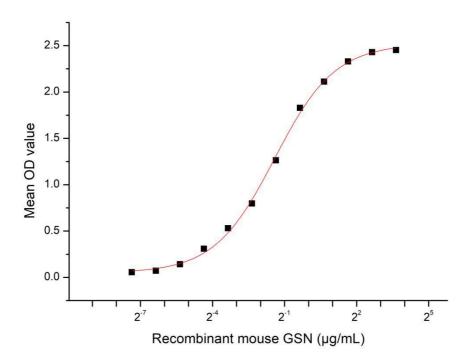


Figure 1. The binding activity of recombinant mouse GSN and recombinant human ACTC1

[IDENTIFICATION]



Figure 2. Gene Sequencing (extract)

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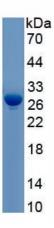


Figure 3. SDS-PAGE

Sample: Active recombinant GSN, Mouse

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.