



APA372Mu03 50µg

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: Ala26~Ala780

Tags: N-terminal His-tag

Purity: >80%

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

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

Original Concentration: 450µg/mL

Applications: Activity Assays.

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

Predicted isoelectric point: 5.8

Predicted Molecular Mass: 88.1kDa

Accurate Molecular Mass: 88kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

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]

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ATTSRGRAQERAPQSRVSEARPSTMVVEHPEFLKAGKEPGLQIWRVEKFDLVPVPPNLYGDF
FTGDAYVILKTVQLRNGNLQYDLHYWLGNECSQDESGAAAFTVQLDDYLNGRAVQHREV
QGFESESTFSGYFKSGLKYKKGGVASGFKHVVPNEVVVQRLFQVKGRRVVRATEVPVSWDSF
NNGDCFILDLGNNIYQWCGSGSNKFERLKATQVSKGIRDNERSGRAQVHVSEEGGEPEAML
QVLGPKPALPEGTEDTAKEDAANRRRLAKLYKVSNGAGSMSVSLVADENPFAQGALRSEDCFI
LDHGRDGGKIFVWKGKQANMEERKAALKTASDFISKMQYPRQTQVSVLPEGGETPLFKQFFK
NWRDPDQTDGPGGLGYLSSHIANVERVPFDAATLHTSTAMAAQHGMDDDDGTGQKQIWRI
EGSNKVPVDPATYQGQFYGGDSYIILYNRHHGRQGQIYNWQGAQSTQDEVAASAILTAQLD
EELGGTPVQSRVVQGKEPAHLMSLFGGKPMIYKGGTSRDGGQTAPASIRLFQVRASSSGAT
RAVEVMPKSGALNSNDAFVLKTPSAAYLWVGAGASEAEKTGAQELLKVLRSQHVQVEEGSE
PDAFWEALGGKTAYRTSPRLKDKKMDAHPRLFACSNRIGRFVIEVPGELMQEDLATDDV
MLLDTWDQVFVWVGKDSQEEEEKTEALTSAKRYIETDPANRDRRTPTVVVRQGFEPSPFVG
WFLGWDDNYWSVDPLDRALAEAA
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[ACTIVITY]

Gelsolin (GSN) is a highly conserved actin-binding protein widely expressed across eukaryotes, functioning as a key regulator of the actin cytoskeleton. It modulates actin filament assembly and disassembly through calcium-dependent severing, capping, and nucleation activities, thereby governing cellular processes like motility, shape change, cytokinesis, and vesicular trafficking. GSN exists in two isoforms: cytoplasmic GSN (regulating intracellular actin dynamics) and plasma GSN (a secreted form involved in extracellular actin scavenging and inflammation modulation). Dysregulation of GSN is associated with multiple pathologies, including neurodegenerative diseases (e.g., Alzheimer's), cancer metastasis, cardiovascular disorders, and inflammatory conditions. Its role in maintaining cytoskeletal homeostasis and extracellular matrix balance makes it a significant molecule in both physiological and pathological contexts. Besides, CTTN has been identified as an interactor of GSN, thus a functional binding ELISA assay was

conducted to detect the interaction of recombinant human GSN and recombinant human CTTN. Briefly, biotin-linked GSN were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 μ l were then transferred to CTTN-coated microtiter wells and incubated for 1h at 37 °C . Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then 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 μ l stop solution to the wells and read at 450nm immediately. The binding activity of GSN and CTTN was shown in Figure 1, the EC50 for this effect is 0.30181 μ g/mL.

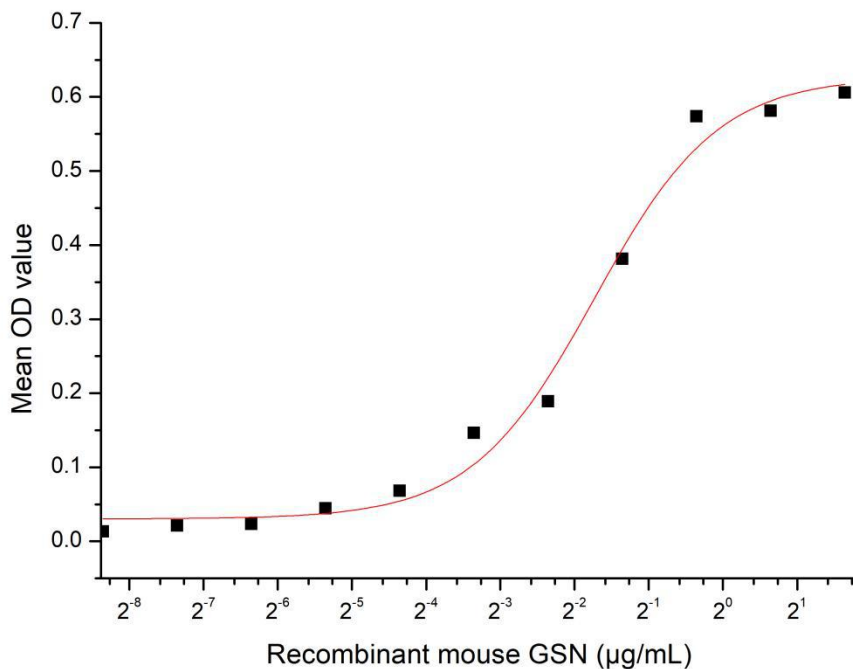


Figure 1. The binding activity of GSN and CTTN

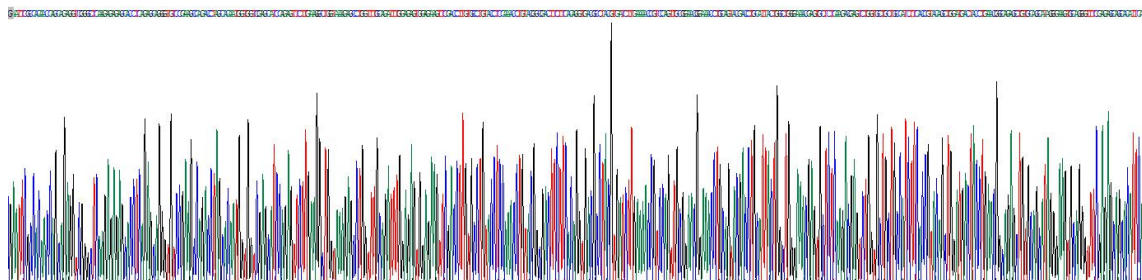


Figure 2. Gene Sequencing (extract)

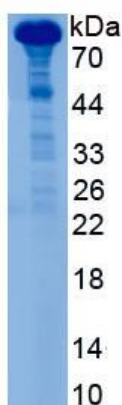


Figure 3. SDS-PAGE

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.