

Product Information

Anti-Gelsolin Antibody, Mouse monoclonal
clone GS-2C4, purified from hybridoma cell culture

Product Number **SAB4200750**

Product Description

Anti-Gelsolin Antibody, Mouse monoclonal (mouse IgG1 isotype) is derived from the GS-2C4 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse.¹ This clone has also been referred to as 2C4 or 2C4c10G2.^{1,2}

Human plasma Gelsolin was used as the immunogen (GeneID: 2934). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Product Number ISO2. The antibody is purified from culture supernatant of hybridoma cells.

Monoclonal Anti-Gelsolin specifically recognizes plasma and cytoplasmic human gelsolin¹⁻⁴. The antibody is specific for an epitope localized on a 47 kDa peptide derived from a chymotryptic cleavage of human gelsolin.¹ Monoclonal Anti-Gelsolin also shows reactivity with Gelsolin from mouse⁵, rabbit⁶, monkey and canine origin but does not react with rat Gelsolin. The antibody may be used in various immunochemical techniques including Immunoblotting (~85kDa), Immunofluorescence³, Immunohistochemistry and Immunoprecipitation⁷.

Gelsolin, also known as Actin-depolymerizing factor (ADF), GSN, AGEL or Brevin, is a calcium-dependent actin-binding protein.⁸ Gelsolin acts as a main modulator of actin filament formation and disassembly and is involved in a variety of cellular mechanisms including apoptosis, signal transduction, transcriptional regulation and epigenetic processes.⁹ Gelsolin operates in at least two variant forms encoded by a single gene and is located both intracellularly (in cytosol and mitochondria) and extracellularly (in blood plasma).⁹ Plasma Gelsolin differs in its sequence from the cytoplasmic variant in possessing a 25-amino acid N-terminal extension.⁹ The main function of the cytoplasmic Gelsolin is to remodel the actin cytoskeleton. Plasma Gelsolin's main role is to scan for actin fibrils that are released by injured tissue into the bloodstream and to bind them in a scavenger mode preventing actin from increasing the blood viscosity.¹⁰ Gelsolin levels correlate with inflammation and several diseases and pathologies, including cancer, infection, cardiac injury, pulmonary diseases, Alzheimer's disease and aging thus making it a potential biomarker of diagnostic and prognostic values.⁸⁻¹¹

Monoclonal Anti-Gelsolin antibody was demonstrated to neutralize the Gelsolin activity *in vivo* and to reduce the egress of progeny virions during parvovirus Minute Virus of Mice (MVM) infection.¹¹

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 1–2.5 µg/mL is recommended using MDCK cell line extract.

Immunohistochemistry: a working concentration of 10–20 µg/ml is recommended using heat-retrieved formalin-fixed, paraffin-embedded human pancreas sections.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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