

Product Information

Anti-GSDMD antibody, Mouse monoclonal

Clone GSD-14, purified from hybridoma cell culture

Product Number **SAB4200798**

Product Description

Monoclonal Anti-GSDMD (mouse IgG1 isotype) is derived from the GSD-14 hybridoma, produced by the fusion of mouse myeloma cells and splenocytes from a mouse immunized with synthetic peptide corresponding to the internal region of human GSDMD, conjugated to KLH as immunogen (GenID: 79792). The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Product Number ISO2). The antibody is purified from the culture supernatant of the hybridoma cells.

Monoclonal Anti-GSDMD recognizes human GSDMD. The antibody is recommended for use in various immunological techniques, including immunoblot (~53 kDa) and immunofluorescence.

GSDMD (gasdermin D) also known as DFNA5L or Gasdermin domain-containing 1 (GSDMDC1), belongs to the gasdermin protein family of epithelial proliferation regulators.¹ GSDMD is expressed in the upper gastrointestinal epithelium differentiating cells and has been suggested to act as a tumor suppressor since it is suppressed in a high percentage of esophageal squamous cell carcinomas and gastric cancers.²

In the presence of lipopolysaccharide (LPS) from Gram-negative bacteria, inflammatory caspases including caspase-4/11 activates downstream pyroptotic cell death, interleukin-1 β processing, and lethal septic shock. The absence of GSDMD, completely blocked LPS electroporation-triggered pyroptosis in studies performed using GSDMD siRNA knockdown or GSDMD knockout (both human HeLa cells and iBMDM mouse cells).³⁻⁵ It was also reported that caspase-4/11 specifically cleaves GSDMD after Asp²⁷⁵, leading to gasdermin-N domain that bears intrinsic pyroptosis inducing activity.³⁻⁴ Furthermore, GSDMD-mediated pyroptosis plays an important role in mature IL-1 β release without affecting its maturation.³⁻⁵

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 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 2-4 μ g/mL is recommended using human Jurkat cell extract.

Immunofluorescence: a working concentration of 5-10 μ g/mL is recommended using human A431 cells.

Note: In order to obtain best results in different techniques and preparations, it is recommended to determine optimal working concentration by titration test.

References

1. Tamura, M. et al., *Genomics.*, **89**, 618-29 (2007).
2. Saeki, N. et al., *Genes Chromosomes Cancer*, **48**, 261-71 (2009).
3. Kayagaki, N. et al., *Nature*, **526**, 666-71 (2015).
4. Shi, J. et al., *Nature*, **526**, 660-65 (2015).
5. He, W.T. et al., *Cell Res.*, **25**, 1285-98 (2015).

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