SANTA CRUZ BIOTECHNOLOGY, INC.

gasdermin (H-6): sc-376318

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Gasdermin, also known as GSDMA, GSDM or FKSG9, is a 445 amino acid protein that localizes to the perinuclear region of the cytoplasm and belongs to the gasdermin family. Expressed predominately in tissues of the gastrointestinal tract and also present in skin and mammary gland, gasdermin functions to induce apoptosis and is thought to possess tumor suppression activity, specifically in gastric cancer cells. The gene encoding gasdermin maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Tumor suppressor p53 is necessary for maintenance of cellular genetic integrity by moderating cell fate through DNA repair versus cell death. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. Like p53, BRCA1 is directly involved in DNA repair, though specifically it is recognized as a genetic determinant of early onset breast cancer and predisposition to cancers of the ovary, colon, prostate gland and fallopian tubes.

CHROMOSOMAL LOCATION

Genetic locus: GSDMA (human) mapping to 17q21.1; Gsdma (mouse) mapping to 11 D.

SOURCE

gasdermin (H-6) is a mouse monoclonal antibody raised against amino acids 1-196 mapping at the N-terminus of gasdermin of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

gasdermin (H-6) is available conjugated to agarose (sc-376318 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376318 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376318 PE), fluorescein (sc-376318 FITC), Alexa Fluor® 488 (sc-376318 AF488), Alexa Fluor® 546 (sc-376318 AF546), Alexa Fluor® 594 (sc-376318 AF594) or Alexa Fluor® 647 (sc-376318 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376318 AF680) or Alexa Fluor® 790 (sc-376318 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

gasdermin (H-6) is recommended for detection of gasdermin A of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for gasdermin siRNA (h): sc-75109, gasdermin siRNA (m): sc-75110, gasdermin shRNA Plasmid (h): sc-75109-SH, gasdermin shRNA Plasmid (m): sc-75110-SH, gasdermin shRNA (h) Lentiviral Particles: sc-75109-V and gasdermin shRNA (m) Lentiviral Particles: sc-75110-V.

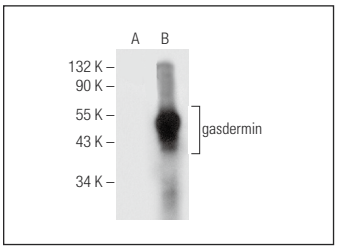
Molecular Weight of gasdermin: 49 kDa.

Positive Controls: gasdermin (m): 293 Lysate: sc-178656.

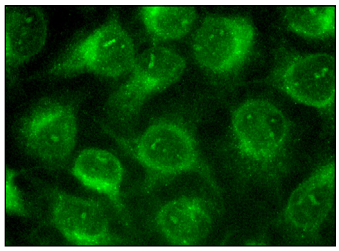
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



gasdermin (H-6): sc-376318. Western blot analysis of gasdermin expression in non-transfected: sc-110760 (**A**) and mouse gasdermin transfected: sc-178656 (**B**) 293 whole cell lysates.



gasdermin (H-6): sc-376318. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Ousingsawat, J., et al. 2018. Contribution of TMEM16F to pyroptotic cell death. Cell Death Dis. 9: 300.
2. Rogers, C., et al. 2019. Gasdermin pores permeabilize mitochondria to augment caspase-3 activation during apoptosis and inflammasome activation. Nat. Commun. 10: 1689.
3. Kapplusch, F., et al. 2019. CASP1 variants influence subcellular caspase-1 localization, pyroptosome formation, pro-inflammatory cell death and macrophage deformability. Clin. Immunol. 208: 108232.
4. Li, L., et al. 2022. Role of caspases and gasdermin A during HSV-1 infection in mice. Viruses 14: 2034.
5. Mitchell, J., et al. 2022. Chronic intestinal inflammation suppresses brain activity by inducing neuroinflammation in mice. Am. J. Pathol. 192: 72-86.
6. Huang, L.Y., et al. 2023. Gasdermin A is required for epidermal cornification during skin barrier regeneration and in an atopic dermatitis-like model. J. Invest. Dermatol. 143: 1735-1745.e11.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.