ARG41404
anti-GSDMD antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes GSDMD
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, WB
Specificity	The antibody reacts to full length and N-terminal fragment (1-275) of GSDMD protein.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	GSDMD
Species	Mouse
Immunogen	Recombinant fusion protein within aa. 1-275 of GSDMD.
Conjugation	Un-conjugated
Alternate Names	FKSG10; DF5L; Gasdermin domain-containing protein 1; Gasdermin-D; DFNA5L; GSDMDC1

Application Instructions

Application table

Application	Dilution
ICC/IF	1:50 - 1:200
WB	1:500 - 1:2000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	Mouse lung
Observed Size	~ 53 kDa

Properties

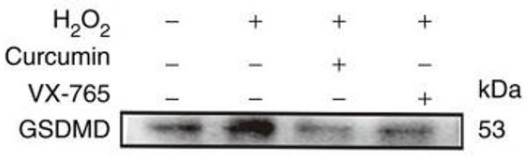
Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	GSDMD
Gene Full Name	gasdermin D
Background	GSDMD (Gasdermin D) is a member of the gasdermin family. Members of this family appear to play a role in regulation of epithelial proliferation. Gasdermin D has been suggested to act as a tumor suppressor. Alternatively spliced transcript variants have been described. [provided by RefSeq, Oct 2009]
Function	GSDMD, N-terminal: Promotes pyroptosis in response to microbial infection and danger signals. Produced by the cleavage of gasdermin-D by inflammatory caspases CASP1 or CASP4 in response to canonical, as well as non-canonical (such as cytosolic LPS) inflammasome activators (PubMed:26375003, PubMed:26375259, PubMed:27418190). After cleavage, moves to the plasma membrane where it strongly binds to inner leaflet lipids, including monophosphorylated phosphatidylinositols, such as phosphatidylinositol 4-phosphate, bisphosphorylated phosphatidylinositols, such as phosphatidylinositol (4,5)-bisphosphate, as well as phosphatidylinositol (3,4,5)-bisphosphate, and more weakly to phosphatidic acid and phosphatidylserine (PubMed:27281216). Homooligomerizes within the membrane and forms pores of 10 - 15 nanometers (nm) of inner diameter, possibly allowing the release of mature IL1B and triggering pyroptosis (PubMed:27418190, PubMed:27281216). Exhibits bactericidal activity. Gasdermin-D, N-terminal released from pyroptotic cells into the extracellular milieu rapidly binds to and kills both Gram-negative and Gram-positive bacteria, without harming neighboring mammalian cells, as it does not disrupt the plasma membrane from the outside due to lipid-binding specificity (PubMed:27281216). Under cell culture conditions, also active against intracellular bacteria, such as Listeria monocytogenes. Strongly binds to bacterial and mitochondrial lipids, including cardiolipin. Does not bind to unphosphorylated phosphatidylinositol, phosphatidylethanolamine nor phosphatidylcholine (PubMed:27281216). [UniProt]
Highlight	Related Antibody Duos and Panels: ARG30330 Pyroptosis Antibody Panel Related products: GSDMD antibodies; GSDMD Duos / Panels; Anti-Rabbit IgG secondary antibodies; Related news: Exploring Antiviral Immune Response RIP1 activation and pathogenesis of NASH Solutions for studying PANoptosis & PANoptosome
Research Area	Pyroptosis Study antibody
Calculated Mw	53 kDa
PTM	Cleavage at Asp-275 by CASP1 (mature and uncleaved precursor forms) or CASP4 relieves autoinhibition and is sufficient to initiate pyroptosis. [UniProt]
Cellular Localization	Gasdermin-D: Cytoplasm, cytosol. Inflammasome. Note=In response to a canonical inflammasome stimulus, such as nigericin, recruited to NLRP3 inflammasone with similar kinetics to that of uncleaved CASP1 precursor. Gasdermin-D, N-terminal: Cell membrane. Secreted. Note=Released in the extracellular milieu following pyroptosis. [UniProt]

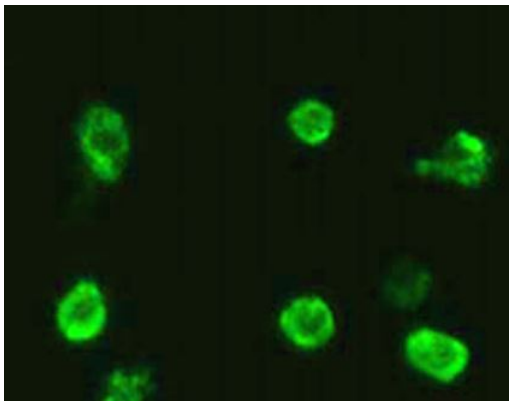
Images



ARG41404 anti-GSDMD antibody WB image

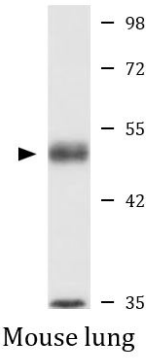
Western blot: HUVECs stained with ARG41404 anti-GSDMD antibody at 1:1000 dilution.

From Yulin Yuan et al. Mol Med Rep. (2022), doi: 10.3892/mmr.2022.12730, Fig. 3.(A).



ARG41404 anti-GSDMD antibody ICC/IF image

Immunofluorescence: RAW264.7 cells stained with ARG41404 anti-GSDMD antibody at 1:100 dilution.



ARG41404 anti-GSDMD antibody WB image

Western blot: 25 µg of Mouse lung lysate stained with ARG41404 anti-GSDMD antibody at 1:1000 dilution.