Revision 5

Store at -20C

#96458

Gasdermin D Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	29, 53	Rabbit	#P57764	79792

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Gasdermin D Antibody recognizes endogenous levels of total Gasdermin D protein. This antibody detects the N-terminal fragment of Gasdermin D upon proteolytic cleavage.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg140 of human Gasdermin D protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Gasdermin D (GSDMD), a member of the gasdermin family that includes GSDMA, GSDMB, and GSDMC, has been reported to have a critical role as a downstream effector of pyroptosis (1,2). Pyroptosis is a lytic type of cell death triggered by inflammasomes, multiprotein complexes assembled in response to pathogen-associated molecular patterns (PAMPs) or danger-associated molecular patterns (DAMPs) that result in the activation of caspase-1 and subsequent cleavage of pro-inflammatory cytokines IL-1β and IL-18 (3). Gasdermin D was identified by two independent groups as a substrate of inflammatory caspases, caspase-1 and caspase-11/4/5, producing two fragments: GSDMD-N and GSDMD-C. Cleavage results in release of an intramolecular inhibitory interaction between the N- and C-terminal domains, allowing the N-terminal fragment GSDMD-N to initiate pyroptosis through the formation of pores on the plasma membrane (4-7).

Background References

1. Kayagaki, N. et al. (2015) *Nature* 526, 666-71.
2. Shi, J. et al. (2015) *Nature* 526, 660-5.
3. Broz, P. and Dixit, V.M. (2016) *Nat Rev Immunol* 16, 407-20.
4. Aglietti, R.A. et al. (2016) *Proc Natl Acad Sci U S A* 113, 7858-63.
5. Ding, J. et al. (2016) *Nature* 535, 111-6.
6. Liu, X. et al. (2016) *Nature* 535, 153-8.
7. Sborgi, L. et al. (2016) *EMBO J* 35, 1766-78.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

H: Human

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KARPAS cell line source: Dr. Abraham Karpas at the University of Cambridge.

Limited Uses

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