For Research Use Only

Cleaved N-terminal GSDMD (Asp275) Polyclonal antibody

Catalog Number:33825-1-AP

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Basic Information

Catalog Number:
33825-1-AP

Size:
150ul , Concentration: 520 ug/ml by Nanodrop;

Source:
Rabbit

Isotype:
IgG

GenBank Accession Number:
BC008904

GeneID (NCBI):
79792

UNIPROT ID:
P57764

Full Name:
gasdermin D

Calculated MW:
484 aa, 53 kDa

Observed MW:
31 kDa

Purification Method:
Antigen affinity Purification

Recommended Dilutions:
WB: 1:500-1:2000

Applications

Tested Applications:
WB, ELISA

Species Specificity:
human

Positive Controls:

WB : PMA, LPS and Brefeldin A treated THP-1 cells,

Background Information

Gasdermin D (GSDMD) is a two-domain cytosolic protein that acts as the principal effector of pyroptosis. In its full-length, uncleaved state, GSDMD adopts an autoinhibited conformation in which the C-terminal domain (CT-GSDMD) binds and suppresses the pore-forming N-terminal domain (NT-GSDMD), thereby preventing premature membrane damage. Upon activation of canonical or non-canonical inflammasomes, inflammatory caspases (primarily caspase-1, -4, and -5 in humans) specifically cleave GSDMD at the aspartate residue 275 (Asp275) within the flexible interdomain linker. This proteolytic event separates the inhibitory CT-domain from the NT-domain, yielding the active cleaved GSDMD (Asp275) fragment-commonly referred to as NT-GSDMD p30. The liberated N-terminal fragment then translocates to the plasma membrane, oligomerizes, and inserts into the lipid bilayer to form large β-barrel pores, which disrupt osmotic homeostasis, cause cell swelling and lysis, and facilitate the release of pro-inflammatory cytokines such as IL-1β and IL-18. Thus, while full-length GSDMD serves as a dormant guardian that maintains cellular integrity, cleaved GSDMD at Asp275 represents the irreversible executioner that triggers inflammatory cell death, underscoring Asp275 as the critical molecular switch that governs pyroptotic signaling.

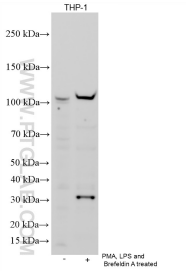
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol, pH7.3
Aliquoting is unnecessary for -20°C storage

***** 20ul sizes contain 0.1% BSA**

For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
W: ptglab.com

Selected Validation Data



Untreated, PMA, LPS and Brefeldin A treated THP-1 cells were subjected to SDS PAGE followed by western blot with 33825-1-AP (Cleaved GSDMD (Asp275) antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.