Anti-GSDMD Antibody [A8D8]

HA601047

Product Type:	Mouse monoclonal IgG2b, primary antibodies
Species reactivity:	Human
Applications:	WB
Molecular Wt:	Predicted band size: 53 kDa
Clone number:	A8D8

Description: Gasdermin D (GSDMD) is a protein that in humans is encoded by the GSDMD gene on chromosome 8. It belongs to the gasdermin family which is conserved among vertebrates and comprises six members in humans, GSDMA, GSDMB, GSDMC, GSDMD, GSDME (DFNA5) and DFNB59 (Pejvakin). Members of the gasdermin family are expressed in a variety of cell types including epithelial cells and immune cells. GSDMA, GSDMB, GSDMC, GSDMD and GSDME have been suggested to act as tumour suppressors. Several current studies have revealed that GSDMD serves as a specific substrate of inflammatory caspases (caspase-1, -4, -5 and -11) and as an effector molecule for the lytic and highly inflammatory form of programmed cell death known as pyroptosis. Hence, GSDMD is an essential mediator of host defence against microbial infection and danger signals. The pore-forming activity of the N-terminal cleavage product causes cell swelling and lysis to prevent intracellular pathogens from replicating, and is required for the release of cytoplasmic content such as the inflammatory cytokine interleukin-1β (IL-1β) into the extracellular space to recruit and activate immune cells to the site of infection. GSDMD has an additional potential role as an antimicrobial by binding to cardiolipin (CL) and form pores on bacterial membranes. Mutation of GSDMD is associated with various genetic diseases and human cancers, including brain, breast, lung, urinary bladder, cervical, skin, oral cavity, pharynx, colon, liver, cecum, stomach, pancreatic, prostate, oesophageal, head and neck, hematologic, thyroid and uterine cancers.

Immunogen:	Recombinant protein within human GSDMD aa 101-300/484.
Positive control:	PC-3 cell lysate, SiHa cell lysate, THP-1 cell lysate.
Subcellular location:	Cytosol, Inflammasome; Secreted, Cell membrane.
Database links:	SwissProt: P57764 Human
Recommended Dilutions:	
WB	1:500
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.
Purity:	Protein A affinity purified.

Images

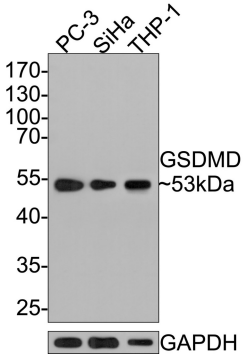

Fig1: Western blot analysis of GSDMD on different lysates with Mouse anti-GSDMD antibody (HA601047) at 1/500 dilution.

Lane 1: PC-3 cell lysate
Lane 2: SiHa cell lysate
Lane 3: THP-1 cell lysate

Lysates/proteins at 10 µg/Lane.

Predicted band size: 53 kDa
Observed band size: 53 kDa

Exposure time: 2 minutes;

10% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA601047) at 1/500 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1:100,000 dilution was used for 1 hour at room temperature.

Background References

1. Shi H. et. al. GSDMD-Mediated Cardiomyocyte Pyroptosis Promotes Myocardial I/R Injury. Circ Res. 2021 Jul
2. Wang K. et. al. Structural Mechanism for GSDMD Targeting by Autoprocessed Caspases in Pyroptosis. Cell. 2020 Mar