Anti-AIM2 Antibody

HA500270

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, FC
Molecular Wt:	Predicted band size: 39 kDa

Description: Involved in innate immune response by recognizing cytosolic double-stranded DNA and inducing caspase-1-activating inflammasome formation in macrophages. Upon binding to DNA is thought to undergo oligomerization and to associate with PYCARD initiating the recruitment of caspase-1 precusrsor and processing of interleukin-1 beta and interleukin-18. Detects cytosolic dsDNA of viral and bacterial origin in a non-sequence-specific manner. Can also trigger PYCARD-dependent, caspase-1-independent cell death that involves caspase-8. Tumor suppressor which may act by repressing NF-kappa-B transcriptional activity. Defects in AIM2 may be a cause of microsatellite unstable colon cancers. In absence of dsDNA pyrin and HIN-20 domain can interact inducing a closed conformation; an autoinhibitory mechanism is proposed in which binding to dsDNA liberates the pyrin domain for homotypic downstream signaling interactions with PYCARD.

Immunogen: Synthetic peptide within human AIM2 aa 50-150 / 343.

Positive control: Hela cell lysates, A431, Hela.

Subcellular location: Cytoplasm, Nucleus.

Database links: SwissProt: O14862 Human

Recommended Dilutions:

WB	1:500
IF-Cell	1:50
FC	1:500-1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Immunogen affinity purified.

Images

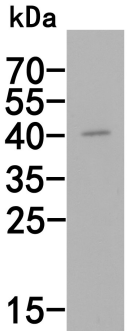

Fig1: Western blot analysis of AIM2 on Hela cell lysates. Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA500270, 1/500) was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

Predicted band size: 39 kDa
Observed band size: 39 kDa

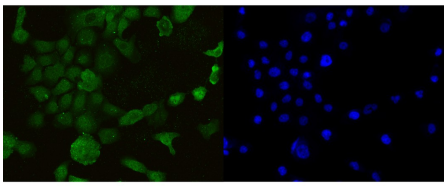

Fig2: ICC staining of AIM2 in A431 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 10% negative goat serum for 15 minutes at room temperature. Cells were probed with the primary antibody (HA500270, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 conjugate-Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

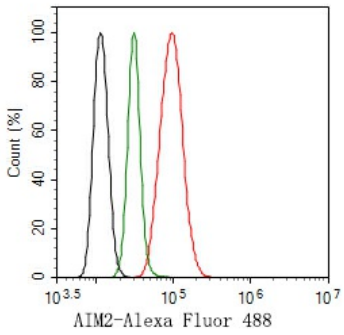

Fig3: Flow cytometric analysis of AIM2 was done on Hela cells. The cells were fixed, permeabilized and stained with the primary antibody (HA500270, 1ug/ml) (red) compared with Rabbit IgG, monoclonal - Isotype Control (green). After incubation of the primary antibody at +4℃ for 1 hour, the cells were stained with a Alexa Fluor®488 conjugate-Goat anti-Rabbit IgG Secondary antibody at 1/1,000 dilution for 30 minutes at +4℃ (dark incubation).Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Chen I.-F. et. al. AIM2 suppresses human breast cancer cell proliferation in vitro and mammary tumor growth in a mouse model. Mol. Cancer Ther. 5:1-7(2006).