SANTA CRUZ BIOTECHNOLOGY, INC.

AIM2 (3C4G11): sc-293174



BACKGROUND

Interferon-inducible protein AIM2 (absent in melanoma 2) is a 343 amino acid protein belonging to the HIN-200 family. Induced by IFN- γ , AIM2 is thought to act as a tumor suppressor by repressing NF κ B transcriptional activity. Localized to the nucleus, AIM2 contains one DAPIN domain and one HIN-200 domain. The DAPIN domain is composed mostly of α -helixes and is a protein-protein interaction domain capable of binding other DAPIN domains. The HIN-200 domain has been shown to bind directly to DNA, which, along with the binding of another protein ASC, results in the activation of caspase-1. AIM2 is present as a homodimer and is expressed highly in small intestine, testis, peripheral blood leukocytes and spleen. Defects in AIM2 are believed to be a cause of microsatellite unstable colon cancers.

REFERENCES

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- 2. Online Mendelian Inheritance in Man, OMIM[™]. 2000. Johns Hopkins University, Baltimore, MD. MIM Number: 604578. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Cresswell, K.S., et al. 2005. Biochemical and growth regulatory activities of the HIN-200 family member and putative tumor suppressor protein, AIM2. Biochem. Biophys. Res. Commun. 326: 417-424.

CHROMOSOMAL LOCATION

Genetic locus: AIM2 (human) mapping to 1q23.1; Aim2 (mouse) mapping to 1 H3

SOURCE

AIM2 (3C4G11) is a mouse monoclonal antibody raised against amino acids 1-195 of AIM2 of human origin.

PRODUCT

Each vial contains 50 μg lgG $_1$ in 0.5 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AIM2 (3C4G11) is recommended for detection of AIM2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AIM2 siRNA (h): sc-88166, AIM2 siRNA (m): sc-140968, AIM2 shRNA Plasmid (h): sc-88166-SH, AIM2 shRNA Plasmid (m): sc-140968-SH, AIM2 shRNA (h) Lentiviral Particles: sc-88166-V and AIM2 shRNA (m) Lentiviral Particles: sc-140968-V.

Molecular Weight of AIM2: 39 kDa.

Positive Controls: human AIM2 (1-195)-hlgGFc transfected HEK293 whole cell lysate.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA





AIM2 (3C4G11): sc-293174. Western blot analysis of AIM2 expression in non-transfected (**A**) and human AIM2 (1-195)-hlgGFc transfected (**B**) HEK293 whole cell lysates

AIM2 (3C4G11): sc-293174. Western blot analysis of human recombinant AIM2 (1-195) fusion protein.

SELECT PRODUCT CITATIONS

- Zhang, M., et al. 2019. AIM2 promotes non-small-cell lung cancer cell growth through inflammasome-dependent pathway. J. Cell. Physiol. 234: 20161-20173.
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- Nie, L., et al. 2021. Diabetes induces macrophage dysfunction through cytoplasmic dsDNA/AIM2 associated pyroptosis. J. Leukoc. Biol. 110: 497-510.
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- Wang, Y., et al. 2023. Bone marrow mesenchymal stem cell-derived exosomal miR-193b-5p reduces pyroptosis after ischemic stroke by targeting AIM2. J. Stroke Cerebrovasc. Dis. 32: 107235.
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RESEARCH USE

For research use only, not for use in diagnostic procedures.