

Product datasheet for **TA337163**

AIM2 Mouse Monoclonal Antibody [Clone ID: 10M2B3]

Product data:

Product Type:	Primary Antibodies
Clone Name:	10M2B3
Applications:	WB
Recommend Dilution:	WB: 0.3-2ug/ml
Reactivity:	Human
Host:	Mouse
Isotype:	IgG2a, kappa
Clonality:	Monoclonal
Immunogen:	This antibody was raised against recombinant human AIM2 protein
Formulation:	PBS containing 0.05% BSA, 0.05% Sodium Azide. Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Concentration:	0.5 mg/ml
Purification:	Protein G purified
Gene Name:	absent in melanoma 2
Database Link:	NP_004824 Entrez Gene 9447 Human



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Background:

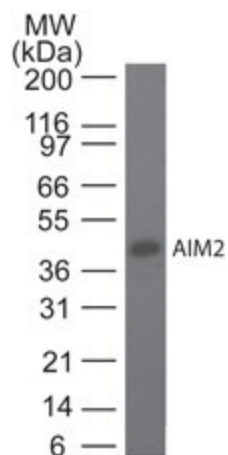
AIM2 (Absent in Melanoma-2) is an interferon-inducible cytosolic protein of the IFI202X/IFI16 family, which is essential for an effective innate immune response. It plays a key role in the defence against bacterial and viral DNA. AIM2 is essential for inflammasome activation in response to *Francisella tularensis*, vaccinia virus and *Listeria monocytogenes* (Fernandes-Alnemri T et al, 2009). It recognizes cytosolic dsDNA and forms a Caspase-1 activating inflammasome with ASC (apoptosis-associated speck-like protein containing a CARD) protein (Jones JW et al, 2010). The C-terminal HIN domain binds double stranded DNA and acts as a cytosolic dsDNA sensor. The pyrin domain allows for the association with ASC and formation of the inflammasome. Formation of the AIM2 inflammasome leads to the processing and release of mature IL-1 β and IL-18 and host cell death (Hornung V et al, 2009). AIM2 plays a role in tumorigenic reversion and may control cell proliferation. It may repress NF-kappaB transcriptional activity. AIM2 antigen is expressed in a wide variety of tumor types, including neuroectodermal tumors, as well as breast, ovarian and colon carcinomas. AIM2 induces the expression of invasion-associated genes such as VIM and MCAM, whereas downregulates ANXA10 and CDH1. AIM2 reduces breast cancer proliferation and mammary tumor growth and shows a high frequency of frameshift mutations in microsatellite unstable (MSI-H) gastric, endometrial and colorectal cancers. Defects in AIM2 expression within immune cells contribute to increased susceptibility to lupus. AIM2 could be used as a tumor antigen target for monitoring vaccine trials or to develop antigen specific active immunotherapy for glioma patients. It may serve as a potential therapeutic gene for future development of AIM2-based gene therapy for human breast cancer (Liu G et al, 2004).

Synonyms:

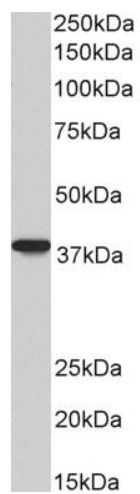
PYHIN4

Protein Pathways:

Cytosolic DNA-sensing pathway

Product images:

Western Blot: AIM2 Antibody (10M2B3) TA337163 - analysis using AIM2 antibody. Recombinant human AIM2 probed with AIM2 antibody at 2 ug/ml.



Western Blot: AIM2 Antibody (10M2B3) TA337163
- Western blot analysis of Daudi lysate (35 ug per lane, RIPA buffer) using AIM2 antibody (TA337163) at 0.3ug/ml. Band observed at ~38kDa. (Expected MW of 39.0kDa according to NP_004824.1)