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#63660

# AIM2 Antibody (Mouse Specific)



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**Entrez-Gene ID** #383619  
**UniProt ID** #Q91VJ1

New 01/19

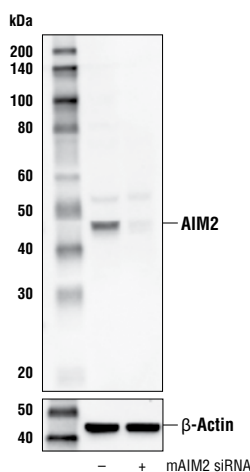
**For Research Use Only. Not For Use In Diagnostic Procedures.**

Applications W, IP Endogenous	Species Cross-Reactivity* M	Molecular Wt. 43 kDa	Source Rabbit**
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**Background:** Absent in melanoma 2 (AIM2) is an interferon-inducible protein containing an amino-terminal pyrin domain and carboxy-terminal HIN-200 domain that functions in innate immunity and tumor progression (1). Expression of AIM2 can inhibit cell growth and tumor formation (2,3). Furthermore, the *AIM2* gene has a high frequency of mutations associated with microsatellite-unstable colorectal cancers (4). AIM2 has a critical role in the activation of caspase-1, the protease responsible for the processing of pro-inflammatory cytokines IL-1 $\beta$  and IL-18. Caspase-1 activation is regulated by multi-protein complexes referred to as "inflammasomes" (5,6). Distinct inflammasome complexes have been described containing NLRP1/NALP1, NLRP3/NALP3, IPAF, and AIM2. The HIN-200 domain of AIM2 is responsible for binding to cytoplasmic double stranded DNA, resulting in caspase-1 activation. (7-9). This inflammasome complex also involves binding of the pyrin domain of AIM2 to the CARD-domain protein ASC/TMS1, which then interacts directly with caspase-1. As a result, AIM2 has been demonstrated to be an important sensor for a number of different pathogens (10-12).

**Specificity/Sensitivity:** AIM2 Antibody (Mouse Specific) recognizes endogenous levels of total AIM2 protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val104 of mouse AIM2 protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from J774A.1 cells, mock transfected (-) or transfected with mouse AIM2 siRNA (mAIM siRNA; +), using AIM2 Antibody (Mouse Specific) (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

#### Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**

#### Background References:

- (1) DeYoung, K.L. et al. (1997) *Oncogene* 15, 453-7.
- (2) Chen, I.F. et al. (2006) *Mol Cancer Ther* 5, 1-7.
- (3) Patsos, G. et al. (2010) *Int J Cancer* 126, 1838-49.
- (4) Woerner, S.M. et al. (2007) *Genes Chromosomes Cancer* 46, 1080-9.
- (5) Schroder, K. and Tschopp, J. (2010) *Cell* 140, 821-32.
- (6) Khare, S. et al. (2010) *Crit Rev Immunol* 30, 463-87.
- (7) Roberts, T.L. et al. (2009) *Science* 323, 1057-60.
- (8) Hornung, V. et al. (2009) *Nature* 458, 514-8.
- (9) Fernandes-Alnemri, T. et al. (2009) *Nature* 458, 509-13.
- (10) Jones, J.W. et al. (2010) *Proc Natl Acad Sci USA* 107, 9771-6.
- (11) Fernandes-Alnemri, T. et al. (2010) *Nat Immunol* 11, 385-93.
- (12) Kim, S. et al. (2010) *Eur J Immunol* 40, 1545-51.

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**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

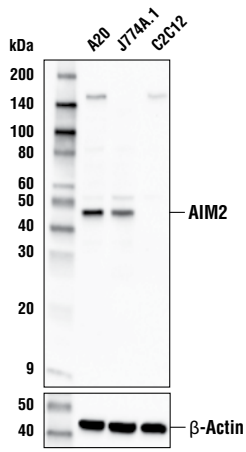
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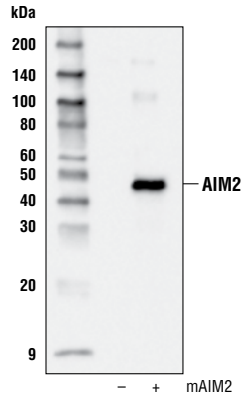
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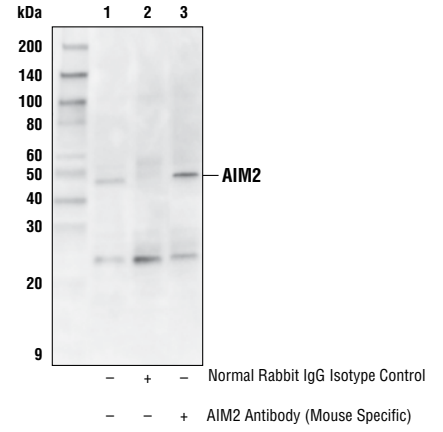
**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Western blot analysis of extracts from A20, J774A.1, and C2C12 cell lines using AIM2 Antibody (Mouse Specific) (upper) or  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with a construct expressing full-length mouse AIM2 (mAIM2; +), using AIM2 Antibody (Mouse Specific).



Immunoprecipitation of mouse AIM2 from J774A.1 cell extracts. Lane 1 is 10% input, lane 2 is Normal Rabbit IgG #2729, and lane 3 is AIM2 Antibody (Mouse Specific). Western blot was performed using AIM2 Antibody (Mouse Specific). Mouse Anti-rabbit IgG (Conformation Specific) (L27A9) mAb (HRP Conjugate) #5127 was used as a secondary antibody.

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