Revision 1

Store at -20C

#13095

AIM2 Antibody (Mouse Specific)

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	M	Endogenous	43	Rabbit	#O14862	9447

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

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.

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-1β 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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key

W: Western Blotting **IP:** Immunoprecipitation

Cross-Reactivity Key

M: Mouse

Trademarks and Patents

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.