Technical Data Sheet

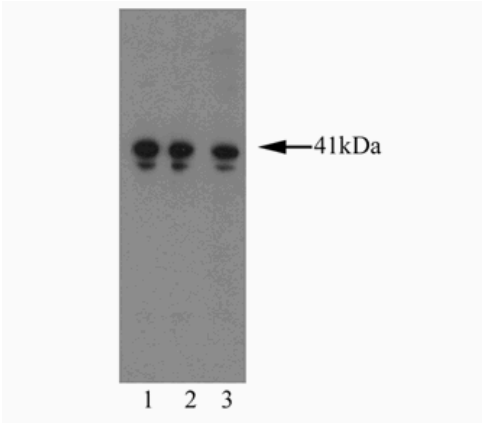
Purified Mouse Anti- AIM-1

Product Information

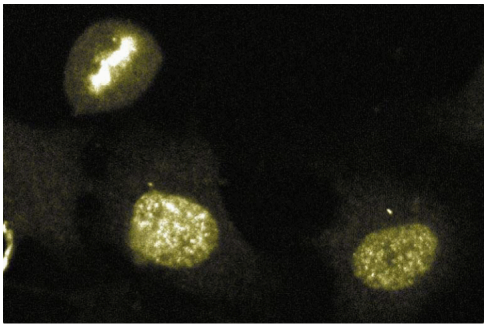
Material Number:	**611083**
Alternate Name:	Aurora B; Aurora and Ipl1-like midbody associated protein
Size:	150 µg
Concentration:	250 µg/ml
Clone:	6/AIM-1
Immunogen:	Rat AIM-1 aa. 2-124
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat
Target MW:	41 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The mitotic phase of the cell cycle is a complex process that ensures the fidelity of chromosome segregation. During the final stage of mitosis (telophase), segregated chromosomes become less condense and nuclear membranes surround the two sets of daughter chromosomes. Simultaneously, the separation and segregation of the cytoplasm (cytokinesis) ensures complete division and formation of two identical daughter cells. Regulation of cytokinesis is poorly understood and errors in this process can lead to cell death or oncogenesis. The *Drosophila* serine/threonine protein kinase Aurora and the *S. cerevisiae* Ipl1 kinase are highly homologous and are required for progression through mitosis. Their mammalian homolog AIM-1 (also known as Aurora and Ipl1-like midbody associated protein) accumulates at the G2/M interface. During late anaphase, AIM-1 is found at the equator of central spindles. However, during telophase and cytokinesis, it is found at the midbody. Although over-expression of a kinase-inactive AIM-1 mutant disrupts formation of the cleavage furrow, nuclear division is unaffected. Thus, it is thought that AIM-1 is essential for cleavage furrowing and the onset of cytokinesis.



Western blot analysis of AIM-1 on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the Mouse Anti- AIM-1 antibody.*



Immunofluorescence staining of human endothelial cells.

Preparation and Storage

Store undiluted at -20°C.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

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Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal
611451	Jurkat Cell Lysate	500 µg	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Chen J, Jin S, Tahir SK. Survivin enhances Aurora-B kinase activity and localizes Aurora-B in human cells. *J Biol Chem.* 2003; 278(7):486-490. (Biology: Immunofluorescence, Immunoprecipitation, Western blot)

Lange BM, Rebollo E, Herold A, Gonzalez C. Cdc37 is essential for chromosome segregation and cytokinesis in higher eukaryotes. *EMBO J.* 2002; 21(20):5364-5374. (Biology: Immunoprecipitation)

Tatsuka M, Katayama H, Ota T. Multinuclearity and increased ploidy caused by overexpression of the aurora- and Ipl1-like midbody-associated protein mitotic kinase in human cancer cells. *Cancer Res.* 1998; 58(21):4811-4816. (Biology)

Terada Y, Tatsuka M, Suzuki F, Yasuda Y, Fujita S, Otsu M. AIM-1: a mammalian midbody-associated protein required for cytokinesis. *EMBO J.* 1998; 17(3):667-676. (Biology)

Trinkle-Mulcahy L, Andrews PD, Wickramasinghe S, et al. Time-lapse imaging reveals dynamic relocalization of PP1gamma throughout the mammalian cell cycle. *Mol Biol Cell.* 2003; 14(1):107-117. (Biology: Immunofluorescence)