



**Mouse (monoclonal)  
Anti-MEK1  
Unconjugated**

**PRODUCT ANALYSIS SHEET**

<b>Catalog Number:</b>	AHO1102
<b>Lot Number:</b>	See product label
<b>Quantity/Volume:</b>	100 µg/0.2 mL
<b>Clone Number:</b>	263P15
<b>Isotype:</b>	IgG <sub>2a</sub> κ (mouse)
<b>Form of Antibody:</b>	Purified immunoglobulin in phosphate buffered saline, pH 7.2, with 1% bovine serum albumin.
<b>Preservation:</b>	0.1% sodium azide (Caution: sodium azide is a poisonous and hazardous substance. Handle with care and dispose of properly.)
<b>Purification:</b>	Purified from ascites by affinity chromatography.
<b>Immunogen:</b>	Recombinant human MEK1 protein.
<b>Specificity:</b>	This antibody recognizes a protein of 45 kDa, identified as MEK1 (also known as ERK kinase 1, MAPK kinase 1, and MKK1). MEK1 is a member of a family of tyrosine/threonine protein kinases that activate the ERK1&2/MAPK enzymes by phosphorylating both the threonine and tyrosine residues of the threonine – glutamic acid – tyrosine (TEY) motif located within the activation loop. MEK1 shares approximately 80% homology with the closely related dual specificity protein kinase MEK2. Active Raf family members phosphorylate MEK1 at serines 218 and 222, thereby activating it. Serine 298 of MEK1 is phosphorylated by PAK proteins, which promotes MEK1 binding to c-Raf and its subsequent phosphorylation of MEK1, leading to activation of the MAPK pathway. This antibody also recognizes MEK2, but not MEK3.
<b>Species Reactivity:</b>	Human, mouse, and rat. Other species were not tested.
<b>Applications:</b>	This antibody is suitable for use in Western blotting and ELISA.
<b>Suggested Working Dilutions:</b>	For Western blotting, the recommended concentration is 0.5-1.0 µg/mL. The optimal antibody concentration should be determined for each specific application.
<b>Recommended Positive Control:</b>	Human A-431 cells, mouse 3T3-L1 cells, and rat L6 cells.
<b>Storage:</b>	Store at 2-8°C. For long term storage, aliquot into small volumes and store at –20°C. Avoid repeated freeze-thaw cycles to prevent denaturing the antibody.

**This product is for research use only. Not for use in diagnostic procedures.**

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## References:

Kolch, W., et al. (2000) Meaningful relationships: the regulation of the Ras/Raf/MEK/ERK pathway by protein interactions. *Biochem. J.* 351:289-305.

Slack-Davis, J.K., et al. (2003) PAK1 phosphorylation of MEK1 regulates fibronectin-stimulated MAPK activation. *Cell Biol.* 162(2):281-291.

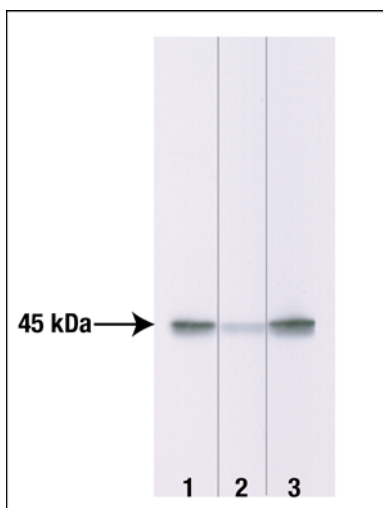
Whitmarsh, A.J. and R.J. Davis (1998) Structural organization of MAP-kinase signaling modulates by scaffold proteins in yeast and mammals. *Trends Biochem. Sci.* 23:481-485.

Whitmarsh, A.J. and R.J. Davis (1999) Signal transduction by MAP kinases: regulation by phosphorylation-dependent switches. *Science's STKE* www.stke.org/cgi/content/full/OC\_sigtrans; 1999/1/pe1.

Widman, C., et al. (1999) Mitogen-activated protein kinase: Conservation of a three-kinase module from yeast to human. *Physiol. Rev.* 79:143-180.

## Related Products:

MEK1 (total) ELISA	Cat. #	KHO0291
MEK1 [pSpS218/222] phosphoELISA™	Cat. #	KHO0321
ERK1/2 (total) ELISA kit	Cat. #	KHO0081
ERK1/2 [pTpY185/187] phosphoELISA™	Cat. #	KHO0091
MEK1 [pT292] Phosphospecific Antibody	Cat. #	44-458G
MEK1 [pT386] Phosphospecific Antibody	Cat. #	44-462G
MEK1/2 [pS222] Phosphospecific Antibody	Cat. #	44-452
MEK1 [pS298] Phosphospecific Antibody	Cat. #	44-460G
MEK1(active) Recombinant Protein	Cat. #	PHO3114/5
MEK1 (phosphorylatable) Recombinant Protein	Cat. #	PHO0114/5
Cell Extraction Buffer	Cat. #	FNN0011



### Western blot analysis

Proteins from cell extracts of human A-431 cells (lane 1), mouse 3T3-L1 cells (lane 2), and rat L6 cells (lane 3) were resolved by SDS-PAGE and transferred to PVDF. The membranes were blocked with a 5% milk-TBST buffer and then incubated with this MEK1 monoclonal antibody (clone 263P15) at a concentration of 1 µg/mL for two hours at room temperature. After washing, the membranes were incubated with a goat F(ab')<sub>2</sub> anti-mouse IgG alkaline phosphatase conjugated antibody (Cat. # AMI4405) at a 1:2000 dilution. Bands were detected with CDP-substrate using the WesternStar™ method (Tropix) and Kodak BioMax film.

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