



Qty: 100µg/200 µl

Mouse anti-MEK1

Catalog No. 13-3500

Lot No. See product label

Mouse anti-MEK1

FORM

This monoclonal antibody is supplied as a 200 µl aliquot, at 0.5 mg/ml, in phosphate buffered saline, pH 7.4, containing 0.1% sodium azide (NaN₃). The antibody is a purified fraction derived from mouse ascites.

CLONE: 3D9

ISOTYPE: Mouse IgG₁

IMMUNOGEN

Purified MEK from mouse T cells and recombinant MEK1.

SPECIFICITY

This antibody is specific for MEK1 and does not cross react with MEK2.

REACTIVITY

Human, mouse, rat and *Xenopus*, (positive control: mouse brain cell lysates).

USAGE

This antibody can be used in immunoblotting and immunoprecipitation experiments. Enzymatically active MEK can be immunoprecipitated and assayed using inactive GST:ERK1 as a substrate⁽¹⁾. The following ranges are recommended as starting points only. Working concentrations for specific applications should be determined by the investigator.

Immunoblotting⁽⁵⁾: 1:2,000

Immunoprecipitation⁽⁶⁾: 2-5 µg

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Do not repeatedly freeze and thaw.

BACKGROUND

MEK (MAP kinase or ERK kinase) is also known as MAP kinase kinase (MAPKK). MEK1 is a dual tyrosine/threonine kinase that phosphorylates and activates MAP kinase (ERK1 and ERK2). MEK1 has a molecular weight of 43.5 kD and contains 393 amino acids. MEK1 is phosphorylated and activated by serine/threonine kinases via 2 different pathways⁽³⁾. These kinases include; c-raf-1, v-raf-1, c-Mos, and MEKK. MEKK shares homology with yeast kinases Ste11 and byr2. MEK2 has been identified and cloned⁽⁴⁾. MEK2 differs from MEK1 in the amino terminal region and between the conserved kinase subdomains 9 and 10. The MEK1 murine gene is found on chromosome 9 the MEK2 gene on chromosome 10. It is likely that more members of the MEK family exist.

(cont'd)

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REFERENCES

1. Crews, C.M. and Erikson, R.L.; *Proc Natl Acad Sci* 89:8205-8209 (1992).
2. Crews, C.M., Alessandrini, A., and Erikson, R.L.; The Primary Structure of MEK, a Protein Kinase That Phosphorylates the ERK Gene Product, *Science* 258:478-480 (1992).
3. Crews, C.M. and Erikson, R.L.; Extracellular Signals and Reversible Protein Phosphorylation: What to Mek of It All, *Cell* 74:215-217 (1993).
4. Broitt, B.K. et al; MEK2 is a kinase related to MEK1 and is differentially expressed in murine tissues, *Cell Growth and Differentiation* (Nov. 1993 - In press).
5. Gredlich, H. and Erikson, R.L.; *J. Biol. Chem.* 273:13280-13288 (1998).
6. Broitt, B. K. et al; *Cell Growth and Differentiation* (1993).

RELATED PRODUCTS

<u>Primary antibody</u>	<u>Clone/PAD</u>	<u>Cat. No.</u>
Rabbit anti-MEKK1	ZK1	51-3400
<u>Product</u>	<u>Conjugate</u>	<u>Cat. No.</u>
Goat anti-Mouse IgG (H+L) (ZyMAX™ Grade)	Purified	81-6500
	FITC	81-6511
	TRITC	81-6514
	Cy™3	81-6515
	Cy™5	81-6516
	HRP	81-6520
	AP	81-6522
	Biotin	81-6540
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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