



Qty: 100 µg/400 µl

Rabbit anti-MAP Kinase
(ERK1 + ERK2)

Catalog No. 61-7400

Lot No. See product label

Rabbit anti-Map Kinase

INTENDED USE

For Research Use Only

This polyclonal antibody is supplied as a 400 µl aliquot at 0.25 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide (NaN₃). The antibody is affinity-purified from rabbit antiserum.

IMMUNOGEN

Synthetic peptide (a.a. 339-353) corresponding to a C-terminal segment of rat ERK1.

SPECIFICITY

This antibody reacts strongly with ERK1 and ERK2. A synthetic peptide, corresponding to a 15 amino acid sequence near the carboxyl terminus (339-353 aa of rat ERK1) was conjugated to carrier protein and used as the immunogen. Reactivity to ERK1 and ERK2 has been confirmed by western blot analysis of human A431 and K562 cells, mouse brain, and rat brain.

REACTIVITY

Human, mouse and rat (positive control: human A431 and K562 cells, mouse brain, and rat brain cell lysates).

USAGE

The dilutions below are only starting recommendations. Optimal dilutions should be determined by the researcher for each individual application.

ELISA:	0.1-1 µg/ml (to coat: 10 µg/ml)
Immunoprecipitation⁽¹⁰⁾:	2-5 µg
Immunohistochemistry:	5-10 µg/ml
Western blotting⁽⁹⁻¹¹⁾:	~1:1000

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Avoid repeated freezing and thawing.

BACKGROUND

Mitogen activated protein kinases (MAPKs) play pivotal roles in mediating signal transduction from the cell surface to the nucleus⁽¹⁾. These kinases are encoded by distinct genes and together form a family of kinases whose activation is dependent upon dual phosphorylation on specific threonine and tyrosine residues. In yeast, a number of different MAP Kinases have been identified and are activated by distinct signaling pathways⁽²⁾. In mammalian cells, the best characterized sub-group of the MAP Kinase family are the extracellular signal regulated kinases (ERKs). To date, at least 4 distinct ERKs have been identified including: ERK1 (p44/p43), ERK2 (p42/p43), ERK3 (p62), and ERK4 (p45)⁽³⁾. Analysis of cDNAs encoding MAP Kinase suggest that numerous other ERKs may exist. MAP Kinase has been shown to phosphorylate numerous proteins including: RSK⁽⁴⁾, c-Fos, c-Jun, c-Myc, c-raf, MAP2, and MEK⁽⁵⁾. MAP Kinase is directly activated when phosphorylated by MEK and indirectly stimulated by many factors^(3,6,7,8).

(cont'd)

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REFERENCES

1. Marshall, C.W., et al; *Cell* 80:179-185 (1995).
2. Herskowitz, I., et al; *Cell* 80:187-197 (1995).
3. Cobb, M.H., et al; *Cell Regulation* 2:965-978 (1991).
4. Sturgill, T.W., et al; *Nature* 334:715-718 (1988).
5. Matsuda, S., et al; *J Biol Chem* 267:3277-3281 (1993).
6. Ward, et al; *Nature* 367:651-654 (1994).
7. Boulton, T.G., et al; *Cell* 65:663-675 (1991).
8. Crews, C.M., et al; *Science* 258:478-480 (1992).
9. Flordeois, C. et al; *J. Biol. Chem.* 270(8):3491-3494 (1995).
10. Le Gallis, L., et al; *Mol. Cell Biol.* 19(6):4121-4133 (1999).
11. Webb, D.J. et al; *J. Biol. Chem.* 274:7412-7420 (1999).

RELATED PRODUCTS

<i>Product</i>	<i>Clone/PAD*</i>	<i>Cat. No.</i>
Ms x MAP Kinase (ERK1+ERK2)	ERK-7D8	13-6200
Ms x p38 α MAP Kinase	p38-3F11	33-1300
Ms x p38 β 2 MAP Kinase	p38-11A5	33-8700
Ms x MAP Kinase (ERK1+ERK2)	ERK-7D8	13-6200
Rb x Raf-1	TRM-12	71-2600
Rb x Phosphoserine	Z-PS1	61-8100
Rb x Phosphothreonine	Z-PT1	71-8200
Ms x Phosphothreonine	PT-5H5	13-9200
anti-Phosphotyrosine	many	see www.invitrogen.com

*PAD, Polyclonal Antibody Designation

<i>Product</i>	<i>Conjugate</i>	<i>Cat. No.</i>
Goat anti-Rabbit IgG (H+L) (ZyMAX™ Grade)	Purified	81-6100
	FITC	81-6111
	TRITC	81-6114
	Cy™3	81-6115
	Cy™5	81-6116
	HRP	81-6120
	AP	81-6122
	Biotin	81-6140
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

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