Qty: 100 µg/200 µl

Mouse anti-ERK1

Catalog No. 13-8600

Lot No. See product label

Mouse anti-ERK1

INTENDED USE

For Research Use Only

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. The antibody is highly purified from mouse ascites by peptide-specific affinity chromatography.

CLONE: ERK-6B11 **ISOTYPE:** IgG_1-kappa

IMMUNOGEN: Synthetic Peptide corresponding to a section of the C-terminus of rat ERK1

SPECIFICITY

This antibody is specific for ERK1 and does not cross react with ERK2 or related molecules. Reactivity has been confirmed by western blot analysis of extracts derived from human A431 and K562 cells, canine MDCK cells, mouse brain, rat brain, and recombinant Erk2 (rec-ERK2 was negative).

USAGE

The dilutions below are only starting recommendations. Optimal concentrations of this antibody should be determined by the researcher for each specific application.

ELISA:	0.1-1 µg/ml
Immunoprecipitation[11]:	2-5 µg
Western Blotting[9,10]:	1 µg/ml

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[1,2,3]

Mitogen Activated Protein Kinases (MAPKs) play pivotal roles in mediating signal transduction from the cell surface to the nucleus. 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. 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). 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[6,7,8].

(cont'd)

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. Waddell, T.K., et al; *J. Biol. Chem.* 270(25):15403-15411 (1995).
10. Gardiner, E.E., et al; *J. Biol. Chem.* 274 (17):11930-11936 (1999).
11. Kawakami, Y., et al; *Proc. Natl. Acad. Sci.* 94:3938-3942 (1997).

RELATED PRODUCTS

Product	***Clone/PAD***	***Cat. No.***
Mouse anti-ERK1+ERK2 (Unconjugated)	ERK-7D8	13-6200
Rabbit anti-ERK1-ERK2 (Unconjugated)	Polyclonal	61-7400
Mouse anti-ERK2	107	13-4800

Product	***Conjugate***	***Cat. No.***
Goat anti-Mouse IgG (H+L)	Purified	81-6500
(ZyMAX™ Grade)	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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