



Qty: 100 µg/200 µL

Mouse anti-RKIP (C-term)

Catalog No. 37-2100

Lot No.

Mouse anti-RKIP (C-term)

FORM

This monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

CLONE: 3E12D7

ISOTYPE: IgG₁-kappa

IMMUNOGEN

Synthetic peptide derived from the C-terminal region of human RKIP protein.

SPECIFICITY

This antibody is specific for the C-terminal region of the RKIP protein. On Western blots, it identifies a band at 30kDa in RKIP-transfected HEK293 lysates and 23kDa in HEK293 lysates or total mouse brain lysates.

REACTIVITY

Reactivity has been confirmed with HEK 293 lysates. Immunoprecipitation tests with HEK293 cell preparations also yielded the ~23 kDa band.

Sample	Immuno-precipitation (native)	Western Blotting
Human	++	+++
Mouse	ND	+++

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Immunoprecipitation: 7-10 µg/IP reaction

Western Blotting: 1-3 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.

(cont'd)

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BACKGROUND

Raf-1 phosphorylates and activates MEK-1, a kinase that activates the extracellular signal-regulated kinases (ERK). The Ras/Raf/MEK/ERK module is a ubiquitously expressed signaling pathway that conveys mitogenic and differentiation signals from the cell membrane to the nucleus¹. This kinase cascade controls the proliferation and differentiation of different cell types^{1,2}. The small G protein Ras is activated by several growth factor receptors, and when activated binds Raf-1 kinase with high affinity. This induces the recruitment of Raf-1 from the cytosol to the cell membrane and its subsequent activation². Activated Raf-1 then phosphorylates the kinase MEK, thus activating it. MEK in turn phosphorylates and activates ERK, the prototypic mitogen-activated protein kinase (MAPK)³. Activated ERKs can translocate to the nucleus and regulate gene expression by the phosphorylation of transcription factors⁴. Raf kinase inhibitor protein (RKIP) is a Raf-1 interacting protein that inhibits the phosphorylation and activation of MEK by Raf-1. RKIP is not a substrate for either Raf-1 or MEK, but competitively disrupts the interaction between these kinases^{5,6}.

REFERENCES

1. Ferrell JE, Jr. *Curr Top Dev Biol* 33:1-60, 1996.
2. Morrison DK, Cutler RE. *Curr Opin Cell Biol* 9:174-179, 1997.
3. Marais R, Marshall CJ. *Cancer Surv* 27:101-125, 1996.
4. Robinson MJ, Cobb MH. *Curr Opin Cell Biol* 9:180-186, 1997.
5. Yeung K, et al. *Nature* 401:173-177, 1999.
6. Yeung K, et al. *Mol Cell Biol* 20:3079-3085, 2000.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Rabbit anti-RKIP (N-term)	ZMD.258	36-0700
Mouse anti-MEK1	3D9	13-3500
Mouse anti-MAP Kinase (ERK1+ERK2)	ERK-7D8	13-6200
Rat anti-v-H-Ras	Y13-259	33-7200
Rabbit anti-Raf-1	Z-61	71-2600
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

*PAD: Polyclonal Antibody Designation

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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