



Qty: 100 µg/200 µL

Mouse anti-Ezrin

For Research Use Only

Catalog No. 35-7300

Lot No.

Mouse anti-Ezrin

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: 3C12

ISOTYPE: Mouse IgG₁

IMMUNOGEN

Recombinant protein containing the C-terminal sequence of human ezrin.

SPECIFICITY

This antibody reacts with the C-terminus of the ~80 kDa human ezrin protein.

REACTIVITY

Reactivity is confirmed with mouse lung, and human JEG-3 choriocarcinoma and Raji Burkitt's lymphoma cell lysates.

Sample	Immuno-histochemistry (frozen)	Immuno-histochemistry (paraffin)*	Immuno-precipitation (native)	Immuno-fluorescence	Western Blotting
Human	+++	+++	+++	+++	+++
Mouse	ND	++	ND	ND	++
Rat	ND	++	ND	ND	ND
Bovine	ND	++	ND	ND	ND
Pig	ND	++	ND	ND	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.

Immunohistochemistry (paraffin)* : 1 – 5 µg/mL
Immunoprecipitation : 1 – 5 µg
Immunofluorescence : 1 – 5 µg/mL
Western Blotting : 0.5 – 2 µg/mL

* **Note:** Immunohistochemistry assays with formalin-fixed, paraffin-embedded tissue sections require HIER (heat induced epitope retrieval) with citrate buffer, pH 6.0. Please contact Technical Services (tech_support@invitrogen.com) for further details.

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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(Rev 10/08) DCC-08-1089

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BACKGROUND

Ezrin, a member of the ERM (ezrin/radixin/moesin) family of proteins, is a ~80 kDa mediator of the interaction between actin filaments and the plasma membrane. In its interaction with the cytoskeleton, ezrin is involved in the formation of microvilli, cell-cell adhesion, cell shape, motility, membrane trafficking, and signal transduction.¹ Ezrin is composed of a C-terminal actin-binding domain, an alpha-helical region, and an N-terminal domain that interacts with CD43, CD44, ICAM-1, ICAM-2, and PIP₂ (phosphatidylinositol 4,5-bisphosphate).^{2,3} Ezrin's function is regulated by its conformation; the amino- and carboxy-termini associate head-to-tail, blocking the F-actin binding domain in ezrin's native conformation.² Merlin, the protein product of the tumor suppressor gene neurofibromatosis-2 (NF2), also binds to ezrin in this head-to-tail orientation.⁴

Phosphorylation of threonine and tyrosine residues has been implicated in ezrin protein activity. Ezrin phosphorylation has been reported on tyrosine residues after growth factor stimulation,⁵ and the phosphorylation of a conserved threonine (T567) is recognized as a key regulator in the transition from membrane-bound ezrin oligomers to active monomers, which induce the formation of actin-rich membrane projections.⁵

Because of its role in cell migration and recognition by the immune system, ezrin expression has been studied in a variety of normal and malignant tissues and cell lines. Ezrin is localized intracellularly under the plasma membrane in microvilli and at sites of cell-cell contact;² normal tissues with high levels of expression include intestine, kidney, and placenta. In cell lines, ezrin expression has been observed in endometrial, pancreatic, colorectal, and breast carcinomas,^{6,7} and tissue expression has been described in uveal melanoma,⁶ the stromal cells of hemangioblastoma (but not glioblastoma),⁸ and astrocytoma (but not oligodendroglioma).⁹

REFERENCES

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4. Gronholm M, et al. *J Cell Sci* 112:895-904, 1999.
5. Gautreau A, et al. *J Cell Biol* 150:193-203, 2000.
6. Makitie T, et al. *Invest Ophthalmol Vis Sci* 42(11):2442-2449, 2001.
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9. Geiger KD, et al. *Am J Pathol* 157(6):1785-1793, 2000.

RELATED PRODUCTS

Product	Clone/PAD*	Cat. No.
Mouse anti-Ezrin	3C12	18-2357
Mouse anti-Actin	ZSA1	03-3100
Rabbit anti-Actin	Polyclonal	18-0054
Mouse anti-CD54 (I-CAM-1)	My13	07-5403, 18-0173
Mouse anti-CD43	MT-1	18-0250
Rat anti-CD44 (H-CAM)	1M7.8.1	13-5500
Mouse anti-CD44 (H-CAM)	DF1485	08-0184
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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