Revision 1

Store at -20C

#50311

EPLIN (D1A7A) Rabbit mAb

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IF-IC	H M R	Endogenous	85, 110	Rabbit IgG	#Q9UHB6	51474

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunofluorescence (Immunocytochemistry)	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

EPLIN (D1A7A) Rabbit mAb recognizes endogenous levels of total EPLIN protein, including EPLIN-α and EPLIN-β isoforms. Based on the absence of signal in NCI-H28 cells, which appear to express low levels of β-Eplin, this antibody may have a preference for α-Eplin by immunofluorescence.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly455 of human EPLIN protein.

Background

Epithelial Protein Lost in Neoplasm (EPLIN) is an actin-binding protein that regulates actin filament dynamics and cross-linking (1). Alpha and beta isoforms are generated from alternate promoters, with the EPLIN-β isoform representing the full-length protein and the EPLIN-α isoform lacking the amino-terminal 160 amino acids (2). Increased expression of EPLIN protein results in more abundant and larger actin stress fibers due to stabilizing of cross-links and inhibition of actin depolymerization. EPLIN protein inhibits Rac1-promoted membrane ruffling and Arp2/3-associated actin filament branching (1).

Research studies demonstrate reduced EPLIN-α expression in tumor tissues, and correlate this reduction with increased invasiveness and poor clinical outcomes (3). The EPLIN protein is an important negative regulator of the epithelial-mesenchymal transition (EMT)(4). While EMT is a critical process during normal embryonic development, dysregulation in transformed cells is a key step in the transition to metastasis (5).

Background References

1. Maul, R.S. et al. (2003) *J Cell Biol* 160, 399-407.
2. Chen, S. et al. (2000) *Gene* 248, 69-76.
3. Liu, Y. et al. (2012) *Anticancer Res* 32, 1283-9.
4. Zhang, S. et al. (2011) *Oncogene* 30, 4941-52.
5. Tsai, J.H. and Yang, J. (2013) *Genes Dev* 27, 2192-206.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat

Trademarks and Patents

Limited Uses

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