

#4044 Store at -20°C

HEF1/NEDD9 (2G9) Mouse mAb



✓ 100 µl
(10 western blots)

Orders ■ 877-616-CELL (2355)
orders@cellsignal.com
Support ■ 877-678-TECH (8324)
info@cellsignal.com
Web ■ www.cellsignal.com

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

| Applications | Species Cross-Reactivity* | Molecular Wt. | Isotype |
|---------------------|---------------------------|---------------|--------------|
| W, IP Endogenous | H, M, R, Mk | 105, 115 kDa | Mouse IgG1** |

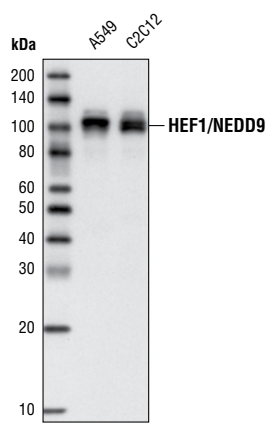
Background: Human enhancer of filamentation protein 1 (HEF1), also known as neural precursor cell expressed developmentally down-regulated protein 9 (NEDD9), is part of the Cas family of proteins, which include HEF1/NEDD9, p130Cas and Efs (1). HEF1 is a predominantly cytoplasmic protein, localizing to focal adhesions during interphase, and centrosomes and other parts of the mitotic apparatus during G2/M phase of the cell cycle (2). HEF1 is a docking protein that plays a central coordinating role for tyrosine kinase-based signaling related to cell adhesion, motility, growth and apoptosis (1). Phosphorylation of HEF1 is induced by a number of factors, including FAK, TGF-β, PDGFR, Abl, and BCR-ABL, which leads to coordinate binding of multiple downstream effector proteins via 15 known SH2 domain-binding sites (1). HEF1 is a key regulator of cancer metastasis. It is required for the invasive activity of glioblastomas (3), is linked to the promotion of metastasis in melanoma (4), and is found to be up-regulated in lung cancer metastasis (5).

Specificity/Sensitivity: HEF1/NEDD9 (2G9) Mouse mAb detects endogenous levels of total HEF1/NEDD9 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a recombinant protein fragment corresponding to residues from the human HEF1/NEDD9 protein.

Background References:

- (1) O'Neill, G.M. et al. (2007) *Cancer Res* 67, 8975–9.
- (2) Law, S.F. et al. (1998) *Mol Cell Biol* 18, 3540–51.
- (3) Natarajan, M. et al. (2006) *Oncogene* 25, 1721–32.
- (4) Kim, M. et al. (2006) *Cell* 125, 1269–81.
- (5) Ji, H. et al. (2007) *Nature* 448, 807–10.



Western blot analysis of extracts from A549 and C2C12 cell lines using HEF1/NEDD9 (2G9) Mouse mAb.

Entrez-Gene ID #4739
Swiss-Prot Acc. #Q14511

Storage: Supplied in 10 mM 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.

*Species cross-reactivity is determined by western blot.

**Anti-mouse secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

| | |
|---------------------|--------|
| Western Blotting | 1:1000 |
| Immunoprecipitation | 1:100 |

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

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

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
 Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.