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## HEF1/NEDD9 (2G9) Mouse mAb

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

<b>Applications:</b> W, IP	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 105, 115	<b>Source/Isotype:</b> Mouse IgG1	<b>UniProt ID:</b> #Q14511	<b>Entrez-Gene Id:</b> 4739
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### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation

#### Dilution

1:1000  
1:100

### 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

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

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).

### Background References

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

### 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **IP:** Immunoprecipitation

### Cross-Reactivity Key

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

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