OriGene Technologies, Inc.
9620 Medical Center Drive, Ste 200
Rockville, MD 20850, US
Phone: +1-888-267-4436
https://www.origene.com
techsupport@origene.com
EU: info-de@origene.com
CN: techsupport@origene.cn

Product datasheet for TA319568

HEF1 (NEDD9) Mouse Monoclonal Antibody [Clone ID: 2G9]

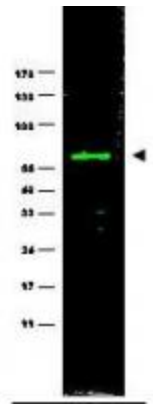
Product data:

Product Type:	Primary Antibodies
Clone Name:	2G9
Applications:	IF, WB
Recommended Dilution:	ELISA: 1:5,000 - 1:20,000, WB: 1:5,000, IF: 1:500, IP: 1:1,000
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Immunogen:	Anti-HEF1 monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to amino acid residues 82-398 of human HEF1 protein (hHEF1, 843 aa, predicted MW 92.8 kDa).
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	neural precursor cell expressed, developmentally down-regulated 9
Database Link:	NP_001135865 Entrez Gene 4739 Human Q14511
Synonyms:	CAS-L; CAS2; CASL; CASS2; HEF1

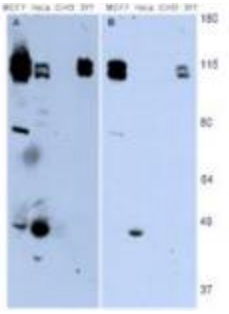
View online »

Note: HEF1, also known as Enhancer of filamentation 1, CRK-associated substrate-related protein, CAS-L, CasL, p105 and Neural precursor cell expressed developmentally down-regulated 9 is the product of the NEDD9 (CASGL) gene. HEF1 functions as a docking protein that plays a central coordinating role for tyrosine-kinase-based signaling related to cell adhesion. HEF1 may also function in transmitting growth control signals between focal adhesions at the cell periphery and the mitotic spindle in response to adhesion or growth factor signals initiating cell proliferation. HEF1 may also play an important role in integrin beta-1 or B cell antigen receptor (BCR) mediated signaling in B- and T-cells. Integrin beta-1 stimulation leads to recruitment of various proteins including CRK, NCK and SHPTP2 to the tyrosine phosphorylated form. HEF1 forms a homodimer and can heterodimerize with HLH proteins ID2, E12, E47 and also with p130cas. HEF1 also forms complexes in vivo with related adhesion focal tyrosine kinase (RAFTK), adapter protein CRKL and LYN kinase and also interacts with MICAL and TXNL4/DIM1. This protein localizes to both the cell nucleus and the cell periphery and is differently localized in fibroblasts and epithelial cells. In fibroblasts, it is predominantly nuclear and in some cells is present in the Golgi apparatus. In epithelial cells, it is localized predominantly in the cell periphery with particular concentration in lamellipodia, but it is also found in the nucleus. HEF1 is widely expressed although higher levels are detected in kidney, lung, and placental tissue. HEF1 is also detected in T-cells, B-cells and diverse cell lines. HEF1 is activated upon induction of cell growth. Cell cycle-regulated processing produces four isoforms: p115, p105, p65, and p55. Isoform p115 arises from p105 phosphorylation and appears later in the cell cycle. Isoform p55 arises from p105 as a result of cleavage at a caspase cleavage-related site and it appears specifically at mitosis. The p65 isoform is poorly detected. Isoforms p105 and p115 are predominantly cytoplasmic and associate with focal adhesions while p55 associates with the mitotic spindle.

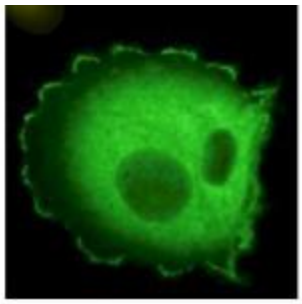
Product images:



WB using monoclonal anti-HEF1 antibody antibody shows detection of a 115 kDa band corresponding to HEF1 in MCF7 lysate (arrowhead). Approximately 35 ug of lysate was loaded for SDS-PAGE followed by transfer onto nitrocellulose and reaction with a 1:1,000 dilution of anti-HEF1 antibody. Detection occurred using a 1:5,000 dilution of IRDye®800 conjugated Sh-a-Mouse IgG [H&L] for 45 min at RT. Molecular weight estimation was made by comparison to prestained MW markers (indicated at left).



WB using monoclonal anti-HEF1 antibody (clone 2G9) shows detection of endogenous HEF1 present in various cell lines. Panel A shows detection using a 15 min exposure. Panel B is the same blot exposed for 2 min. The doublet represents p105 and p115 staining. The lower MW band represents p55. 3Y1 cells are derived from rat fibroblast cells. Mouse 3T3 cells are also reactive (not shown). To date no staining has been noted on CHO cells.



Immunofluorescence microscopy using Monoclonal anti-HEF1 antibody (clone 2G9) shows detection of HEF1 localized at focal adhesion sites. The antibody was used at a 1:500 dilution with a 3-sec exposure time. Personal Communication. Elena Pugacheva, Fox Chase Cancer Center, Philadelphia, PA.