Datasheet for ABIN129519

anti-NEDD9 antibody (AA 82-398)

2 Images | 1 Publication

Go to Product page

Overview

Quantity:	100 µg
Target:	NEDD9
Binding Specificity:	AA 82-398
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Application:	Western Blotting (WB), ELISA, Immunofluorescence (IF), Immunoprecipitation (IP), Fluorescence Microscopy (FM)

Product Details

Purpose:	HEF1 Antibody
Immunogen:	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. Immunogen Type: Conjugated Peptide
Clone:	14A11
Isotype:	IgG2b kappa
Cross-Reactivity (Details):	This Protein A purified antibody is directed against human HEF1 protein.
Characteristics:	Synonyms: mouse anti-hEF1 antibody, mouse anti-NEDD-9 antibody, mouse anti-CASL antibody, Cas like docking antibody, CASL antibody, Crk associated substrate related protein antibody, dJ49G10.2 antibody, dJ761I2.1 antibody, Enhancer of filamentation 1 antibody
Purification:	The product was purified from tissue culture supernatant by chromatography.

Product Details

Sterility:	Sterile filtered

Target Details

Target:	NEDD9
Alternative Name:	NEDD9 (NEDD9 Products)
Background:	Background: 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 is predominantly nuclear and in some cells is present in the Golgi apparatus. In epithelial cells localized predominantly in the cell periphery with particular concentration in lamellipodia but 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 detects. Isoforms p105 and p115 are predominantly cytoplasmic and associate with focal adhesions while p55 associate with the mitosis spindle.
Gene ID:	4739, 5453680
UniProt:	Q14511

Application Details

Application Notes:	Application Note: This monoclonal antibody has been tested for use in western blotting, immunoprecipitation and immunofluorescence. This clone recognizes HEF1 under non-denaturing conditions. Specific conditions for reactivity should be optimized by the end user. Expect bands approximately 115 and 105 in size corresponding to isoforms of HEF1 protein by western blotting in the appropriate cell lysate or extract. This antibody does not recognize p130Cas. Sin1 has not been tested. IF was performed using 4 % PFA fixed cells. This monoclonal mostly detects HEF1 localized at the focal adhesion sites. Western Blot Dilution: 1:500 Immunoprecipitation Dilution: 1:100 ELISA Dilution: 1:5,000 - 1:20,000 IF Microscopy Dilution: 1:100 Other: User Optimized
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	1.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C,-20 °C
Storage Comment:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

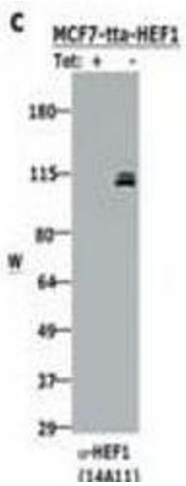
Publications

Product cited in:	Pugacheva, Golemis: "The focal adhesion scaffolding protein HEF1 regulates activation of the

Publications

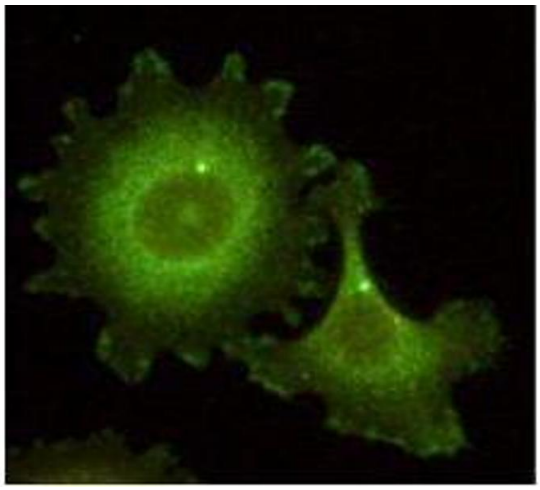
Aurora-A and Nek2 kinases at the centrosome." in: **Nature cell biology**, Vol. 7, Issue 10, pp. 937-46, (2005) (PubMed).

Images



Western Blotting

Image 1. Western blotting using Monoclonal anti-HEF1 antibody (clone 14A11) shows detection of HEF1 present in MCF-7 cells induced to express HEF1 by tetracycline removal (right lane). See Pugacheva et al for details.



Immunofluorescence

Image 2. Immunofluorescence microscopy using Monoclonal anti-HEF1 antibody (clone 14A11) shows detection of HEF1 localized at the centrosome (bright dots) and focal adhesion sites. The antibody was used at a 1:100 dilution with a 1-min exposure time. Personal Communication. Elena Pugacheva, Fox Chase Cancer Center, Philadelphia, PA.