

Product datasheet

Anti-HEF1 antibody ab88584

3 Images

Overview

Product name	Anti-HEF1 antibody
Description	Mouse polyclonal to HEF1
Host species	Mouse
Tested applications	Suitable for: WB, ICC/IF
Species reactivity	Reacts with: Human
Immunogen	Recombinant full length human HEF1, amino acids 1-834 (NP_006394.1).
Positive control	293 cell lysate, HEF1 transfected 293T lysate, HeLa cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None Constituents: 1X PBS, pH 7.2
Purity	Protein A purified
Clonality	Polyclonal
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab88584** in the following tested applications.

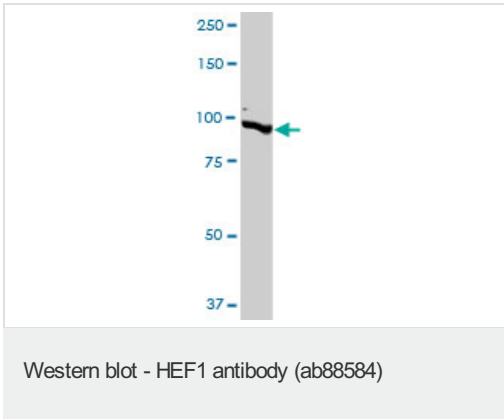
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use a concentration of 1 - 5 µg/ml. Predicted molecular weight: 93 kDa.
ICC/IF		Use a concentration of 10 µg/ml.

Target

Function	Docking protein which plays a central coordinating role for tyrosine-kinase-based signaling related to cell adhesion. May 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. May 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.
Tissue specificity	Widely expressed. Higher levels detected in kidney, lung, and placenta. Also detected in T-cells, B-cells and diverse cell lines. The protein has been detected in lymphocytes, in diverse cell lines, and in lung tissues.
Sequence similarities	Belongs to the CAS family. Contains 1 SH3 domain.
Domain	Contains a central domain containing multiple potential SH2-binding sites and a C-terminal domain containing a divergent helix-loop-helix (HLH) motif. The SH2-binding sites putatively bind CRK, NCK and ABL SH2 domains. The HLH motif confers specific interaction with the HLH proteins ID2, E12 and E47. It is absolutely required for the induction of pseudohyphal growth in yeast and mediates homodimerization and heterodimerization with p130cas. The SH3 domain interacts with two proline-rich regions of focal adhesion kinase.
Post-translational modifications	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. Focal adhesion kinase 1 phosphorylates the protein at the YDYVHL motif (conserved among all cas proteins). The SRC family kinases (FYN, SRC, LCK and CRK) are recruited to the phosphorylated sites and can phosphorylate other tyrosine residues. Ligation of either integrin beta-1 or B-cell antigen receptor on tonsillar B-cells and B-cell lines promotes tyrosine phosphorylation and both integrin and BCR-mediated tyrosine phosphorylation requires an intact actin network. In fibroblasts transformation with oncogene v-ABL results in an increase in tyrosine phosphorylation. Transiently phosphorylated following CD3 cross-linking and this phosphorylated form binds to CRK and C3G. A mutant lacking the SH3 domain is phosphorylated upon CD3 cross-linking but not upon integrin beta-1 cross-linking. Tyrosine phosphorylation occurs upon stimulation of the G-protein coupled C1a calcitonin receptor in rabbit. Calcitonin-stimulated tyrosine phosphorylation is mediated by calcium- and protein kinase C-dependent mechanisms and requires the integrity of the actin cytoskeleton.
Cellular localization	Cytoplasm > cytoskeleton > spindle and Cytoplasm > cell cortex. Nucleus. Golgi apparatus. Cell projection > lamellipodium. Cytoplasm. Cell junction > focal adhesion. 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. Isoforms p105 and p115 are predominantly cytoplasmic and associate with focal adhesions while p55 associates with mitotic spindle.

Images



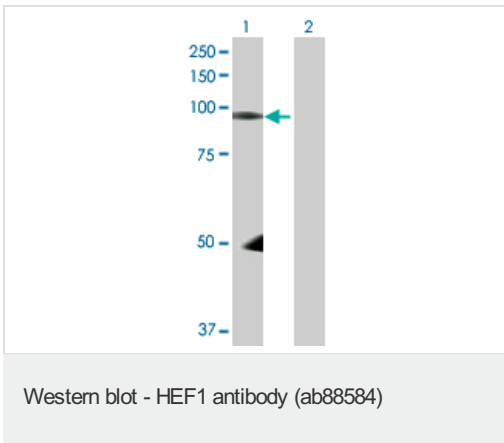
Anti-HEF1 antibody (ab88584) at 1 µg/ml +
293 cell lysate at 50 µg

Secondary

Goat anti-Mouse IgG (H+L) HRP at 1/5000
dilution

Predicted band size: 93 kDa

Observed band size: 93 kDa



All lanes : Anti-HEF1 antibody (ab88584) at
1 µg/ml

Lane 1 : HEF1 transfected 293T cell lysate

Lane 2 : Non-transfected lysate

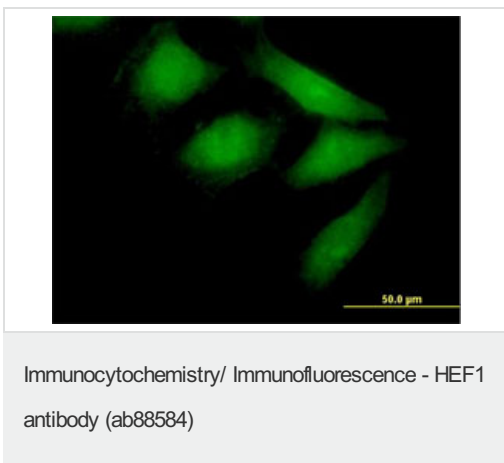
Lysates/proteins at 25 µg per lane.

Secondary

All lanes : Goat anti-Mouse IgG (H+L) HRP at
1/5000 dilution

Predicted band size: 93 kDa

Observed band size: 93 kDa



ab88584 at 10µg/ml staining HEF1 in HeLa
cells by Immunofluorescence.

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