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Fer Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8466b

Product Information

Application	WB, FC, IF, E
Primary Accession	P70451
Reactivity	Human, Rat, Mouse
Host	Mouse
Clonality	monoclonal
Isotype	IgG2a,k
Clone Names	1487CT794.8.50
Calculated MW	94579

Additional Information

Gene ID	14158
Other Names	Tyrosine-protein kinase Fer, Proto-oncogene c-Fer, p94-Fer, Fer, Fert2
Target/Specificity	This Fer antibody is generated from a mouse immunized with a recombinant protein.
Dilution	WB~~1:4000 FC~~1:25 IF~~1:25 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Fer Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Fer
Synonyms	Fert2
Function	Tyrosine-protein kinase that acts downstream of cell surface receptors for growth factors and plays a role in the regulation of the actin cytoskeleton, microtubule assembly, lamellipodia formation, cell adhesion, cell migration and chemotaxis. Acts downstream of EGFR, KIT, PDGFRA and PDGFRB. Acts downstream of EGFR to promote activation of NF- kappa-B and cell

	proliferation. May play a role in the regulation of the mitotic cell cycle. Plays a role in the insulin receptor signaling pathway and in activation of phosphatidylinositol 3-kinase. Acts downstream of the activated FCER1 receptor and plays a role in FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Plays a role in the regulation of mast cell degranulation. Plays a role in leukocyte recruitment and diapedesis in response to bacterial lipopolysaccharide (LPS). Phosphorylates CTTN, CTNND1, PTK2/FAK1, GAB1, PECAM1 and PTPN11. May phosphorylate JUP and PTPN1. Can phosphorylate STAT3 according to PubMed:10878010 and PubMed:19159681, but clearly plays a redundant role in STAT3 phosphorylation. According to PubMed:11134346, cells where wild type FER has been replaced by a kinase-dead mutant show no reduction in STAT3 phosphorylation. Phosphorylates TMF1. Isoform 3 lacks kinase activity.
Cellular Location	Cytoplasm. Cytoplasm, cytoskeleton. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection. Cell junction. Membrane; Peripheral membrane protein; Cytoplasmic side. Nucleus. Cytoplasm, cell cortex. Note=Detected on microtubules in polarized and motile vascular endothelial cells. Colocalizes with F-actin at the cell cortex. Colocalizes with PECAM1 and CTNND1 at nascent cell-cell contacts (By similarity). Not detected in the nucleus, but detected in the nuclear area surrounding the chromosomes after breakdown of the nuclear envelope during mitosis (PubMed:11339827). {ECO:0000250, ECO:0000269|PubMed:11339827}
Tissue Location	Detected in liver and testis. Isoform 4 is detected only in testis (at protein level). Widely expressed

Background

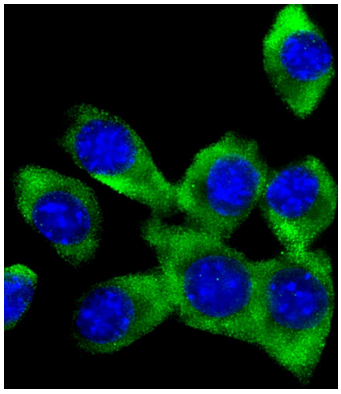
Tyrosine-protein kinase that acts downstream of cell surface receptors for growth factors and plays a role in the regulation of the actin cytoskeleton, microtubule assembly, lamellipodia formation, cell adhesion, cell migration and chemotaxis. Acts downstream of EGFR, KIT, PDGFRA and PDGFRB. Acts downstream of EGFR to promote activation of NF-kappa-B and cell proliferation. May play a role in the regulation of the mitotic cell cycle. Plays a role in the insulin receptor signaling pathway and in activation of phosphatidylinositol 3-kinase. Acts downstream of the activated FCER1 receptor and plays a role in FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Plays a role in the regulation of mast cell degranulation. Plays a role in leukocyte recruitment and diapedesis in response to bacterial lipopolysaccharide (LPS). Phosphorylates CTTN, CTNND1, PTK2/FAK1, GAB1, PECAM1 and PTPN11. May phosphorylate JUP and PTPN1. Can phosphorylate STAT3 according to PubMed:10878010 and PubMed:19159681, but clearly plays a redundant role in STAT3 phosphorylation. According to PubMed:11134346, cells where wild type FER has been replaced by a kinase-dead mutant show no reduction in STAT3 phosphorylation. Phosphorylates TMF1. Isoform 3 lacks kinase activity.

References

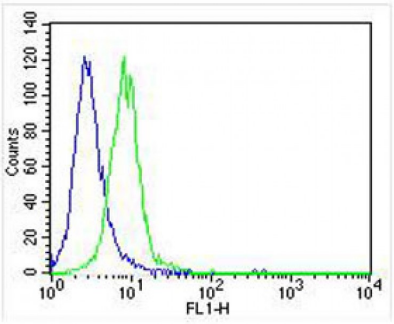
Letwin K.,et al.Submitted (OCT-1996) to the EMBL/GenBank/DDBJ databases.
Fischman K.,et al.Mol. Cell. Biol. 10:146-153(1990).
Iwanishi M.,et al.J. Biol. Chem. 275:38995-39000(2000).
Carninci P.,et al.Science 309:1559-1563(2005).
Kim L.,et al.Mol. Cell. Biol. 15:4553-4561(1995).

Images

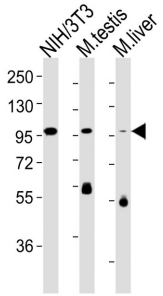
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized



NIH/3T3 (mouse embryonic fibroblast cell line) cells labeling Fer with AM8466b at 1/25 dilution, followed by Dylight® 488-conjugated goat anti-mouse IgG (NA166821) secondary antibody at 1/200 dilution (green). Immunofluorescence image showing cytoplasm staining on NIH/3T3 cell line. The nuclear counter stain is DAPI (blue).



Overlay histogram showing NIH/3T3 cells stained with AM8466b (green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AM8466b, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(NA168821) at 1/400 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.



All lanes : Anti-Fer Antibody at 1:4000 dilution Lane 1: NIH/3T3 whole cell lysates Lane 2: mouse testis lysates Lane 3: mouse liver lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 95 kDa Blocking/Dilution buffer: 5% NFDM/TBST.