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FER Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1125a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	P16591
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	5D2C4
Isotype	IgG1
Calculated MW	94638
Description	FER (fer tyrosine kinase) is a member of the FPS/FES family of nontransmembrane receptor tyrosine kinases, which shares a functional domain and is involved in signaling pathways through receptor tyrosine kinases (RTK) and cytokine receptors. The Fes /Fps family is distinct from c-Src, c-Abl and related nRTKs and was originally distinguished as a homolog to retroviral oncoproteins. In vivo, Fer kinase assembles into homotrimers via conserved coiled-coil domains. The N-terminal coiled-coil domains of Fer can autophosphorylate in trans, thereby regulating their cellular function through differential phosphorylation states. Growth factor exposure can induce tyrosine phosphorylation of Fer and recruitment of Fer to RTK complexes containing p85. It is expressed predominantly in mature hematopoietic cells of the granulocytic and monocytic lineage, and has been shown to be expressed in vascular endothelial cells. Fer is implicated in insulin signaling, cell-cell signaling, human prostatic proliferative diseases, and is involved in the regulation of G1 progression.
Immunogen	Purified recombinant fragment of human FER expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2241
Other Names	Tyrosine-protein kinase Fer, 2.7.10.2, Feline encephalitis virus-related kinase FER, Fujinami poultry sarcoma/Feline sarcoma-related protein Fer, Proto-oncogene c-Fer, Tyrosine kinase 3, p94-Fer, FER, TYK3
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. 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

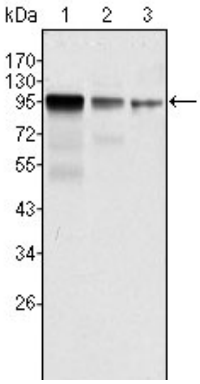
Name	FER
Synonyms	TYK3
Function	Tyrosine-protein kinase that acts downstream of cell surface receptors for growth factors and plays a role in the regulation of the actin cytoskeleton, microtubule assembly, lamellipodia formation, cell adhesion, cell migration and chemotaxis. Acts downstream of EGFR, 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). Plays a role in synapse organization, trafficking of synaptic vesicles, the generation of excitatory postsynaptic currents and neuron-neuron synaptic transmission. Plays a role in neuronal cell death after brain damage. Phosphorylates CTTN, CTNND1, PTK2/FAK1, GAB1, PECAM1 and PTPN11. May phosphorylate JUP and PTPN1. Can phosphorylate STAT3, but the biological relevance of this depends on cell type and stimulus.
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=Associated with the chromatin. 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
Tissue Location	Isoform 1 is detected in normal colon and in fibroblasts (at protein level). Isoform 3 is detected in normal testis, in colon carcinoma-derived metastases in lung, liver and ovary, and in colon carcinoma and hepato carcinoma cell lines (at protein level) Isoform 3 is not detected in normal colon or in normal fibroblasts (at protein level). Widely expressed.

References

1. Li L. Cheng X. Ling HQ. Plant Mol Biol. 2004, Jan, 54(1):125-36. 2. Girault JA. Greengard P. Arch Neurol. 2004, May, 61(5):641-4. 3. Fan L. Di Ciano-Oliveira C. Weed SA. et al. Biochem J. 2004, Jun 1, 380(Pt 2):581-91.

Images

Figure 1: Western blot analysis using FER mouse mAb against NIH/3T3 (1), A549 (2) and SK-MEL-5 (3) cell lysate.



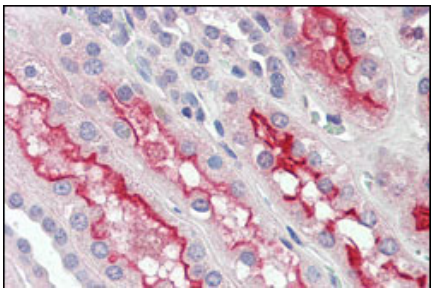


Figure 2: Immunohistochemical analysis of paraffin-embedded human kidney tissues using FER mouse mAb.

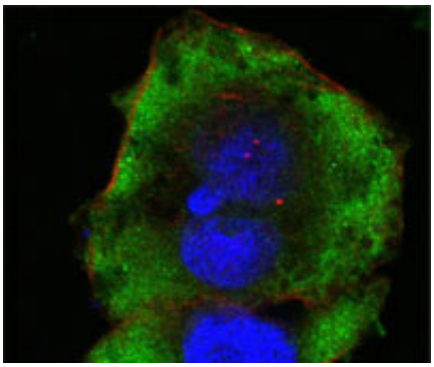


Figure 3: Confocal immunofluorescence analysis of Hela cells using FER mouse mAb (green). Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.