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FES Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1119a

Product Information

Application	WB, IHC, E
Primary Accession	P07332
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2E3G3; 2G9G1
Isotype	IgG1
Calculated MW	93497
Description	FES (feline sarcoma oncogene) and Fer are the only two members of a unique family of cytoplasmic protein tyrosine kinases. FES and Fer contain a central Src homology-2 (SH2) domain and a carboxy-terminal tyrosine kinase catalytic domain. They are structurally distinguished from other members of cytoplasmic protein tyrosine kinase subfamilies by the presence of amino-terminal Fer/CIP4 homology and coiled-coil domains. FES was originally identified as an oncogene from avian and feline retroviruses. Human c-Fes has been implicated in myeloid, vascular endothelial and neuronal cell differentiation. FES has tyrosine-specific protein kinase activity and that activity is required for maintenance of cellular transformation. Mutations may activate the FES kinase and thereby contribute to cancer. However, recent data strongly suggests that the c-FES protein-tyrosine kinase is a tumor suppressor rather than a dominant oncogene in colorectal cancer.
Immunogen	Purified recombinant fragment of FES (AA:613-822)expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2242
Other Names	Tyrosine-protein kinase Fes/Fps, 2.7.10.2, Feline sarcoma/Fujinami avian sarcoma oncogene homolog, Proto-oncogene c-Fes, Proto-oncogene c-Fps, p93c-fes, FES, FPS
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 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	FES Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	FES
Synonyms	FPS
Function	Tyrosine-protein kinase that acts downstream of cell surface receptors and plays a role in the regulation of the actin cytoskeleton, microtubule assembly, cell attachment and cell spreading. Plays a role in FCER1 (high affinity immunoglobulin epsilon receptor)-mediated signaling in mast cells. Acts down-stream of the activated FCER1 receptor and the mast/stem cell growth factor receptor KIT. Plays a role in the regulation of mast cell degranulation. Plays a role in the regulation of cell differentiation and promotes neurite outgrowth in response to NGF signaling. Plays a role in cell scattering and cell migration in response to HGF-induced activation of EZR. Phosphorylates BCR and down-regulates BCR kinase activity. Phosphorylates HCLS1/HS1, PECAM1, STAT3 and TRIM28.
Cellular Location	Cytoplasm, cytosol. Cytoplasm, cytoskeleton. Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cytoplasmic vesicle. Golgi apparatus. Cell junction, focal adhesion Note=Distributed throughout the cytosol when the kinase is not activated. Association with microtubules requires activation of the kinase activity. Shuttles between focal adhesions and cell-cell contacts in epithelial cells. Recruited to the lateral cell membrane in polarized epithelial cells by interaction with phosphorylated EZR Detected at tubular membrane structures in the cytoplasm and at the cell periphery
Tissue Location	Widely expressed. Detected in adult colon epithelium (at protein level) (PubMed:16455651, PubMed:19051325) Expressed in melanocytes (at protein level) (PubMed:28463229)

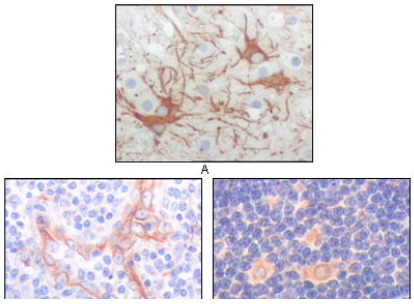
References

1. Delfino FJ. Stevenson H. Smithgall TE. J Biol Chem. 2006, Mar 31, 281(13): 8829-35. Epub 2006 Feb 2.2. Durfee WK. Rivard A. J Biomech Eng. 2005, Nov, 127(6):1014-9. 3. Vitenzon AS. Mironov EM. Petrushanskaya KA. Neurosci Behav Physiol. 2005, Sep, 35(7):709-14.

Images

Figure 1: Western blot analysis using FES mouse mAb against truncated FES recombinant protein.

Figure 2: Immunohistochemical analysis of paraffin-embedded human cerebrum tumor (A), endothelium of vessel (B), lymphocyte of thymus(C),



showing cytoplasmic localization using FES mouse mAb with DAB staining.