

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                                           |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human FGF acidic/FGF1 in direct ELISAs and Western blots.                               |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>2A</sub> Clone # 939902                                               |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                                      |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human FGF acidic/FGF1<br>Phe16-Asp155<br>Accession # P05230 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                 |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                                    |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                                 |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

FGF acidic, also known as FGF1, ECGF, and HBGF-1, is a 17 kDa nonglycosylated member of the FGF family of mitogenic peptides. FGF acidic, which is produced by multiple cell types, stimulates the proliferation of all cells of mesodermal origin and many cells of neuroectodermal, ectodermal, and endodermal origin. It plays a number of roles in development, regeneration, and angiogenesis (1-3). Human FGF acidic shares 54% amino acid sequence identity with FGF basic and 17%-33% with other human FGFs. It shares 92%, 96%, 96%, and 96% aa sequence identity with bovine, mouse, porcine, and rat FGF acidic, respectively, and exhibits considerable species cross-reactivity. Alternate splicing generates a truncated isoform of human FGF acidic that consists of the N-terminal 40% of the molecule and functions as a receptor antagonist (4). During its nonclassical secretion, FGF acidic associates with S100A13, copper ions, and the C2A domain of synaptotagmin 1 (5). It is released extracellularly as a disulfide-linked homodimer and is stored in complex with extracellular heparan sulfate (6). The ability of heparan sulfate to bind FGF acidic is determined by its pattern of sulfation, and alterations in this pattern during embryogenesis thereby regulate FGF acidic bioactivity (7). The association of FGF acidic with heparan sulfate is a prerequisite for its subsequent interaction with FGF receptors (8, 9). Ligand triggers receptor dimerization, transphosphorylation, and internalization of receptor/FGF complexes (10). Internalized FGF acidic can translocate to the cytosol with the assistance of Hsp90 and then migrate to the nucleus by means of its two nuclear localization signals (11-13). The phosphorylation of FGF acidic by nuclear PKC delta triggers its active export to the cytosol where it is dephosphorylated and degraded (14, 15). Intracellular FGF acidic functions as a survival factor by inhibiting p53 activity and proapoptotic signaling (16).

#### PRODUCT SPECIFIC NOTICES

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