

DESCRIPTION

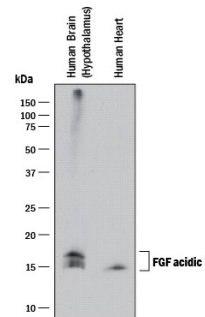
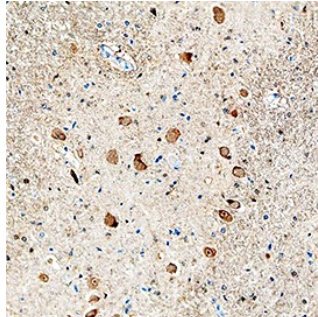
Species Reactivity	Human
Specificity	Detects human FGF acidic in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG _{2A} Clone # 939902
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human FGF acidic Phe16-Asp155 Accession # P05230
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below
Immunohistochemistry	5-25 µg/mL	See Below

DATA

<p>Western Blot</p> 	<p>Detection of Human FGF acidic by Western Blot. Western blot shows lysates of human brain (hypothalamus) tissue and human heart tissue. PVDF membrane was probed with 1 µg/mL of Mouse Anti-Human FGF acidic Monoclonal Antibody (Catalog # MAB2321) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). Specific bands were detected for FGF acidic at approximately 16-17 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p>Immunohistochemistry</p>  <p>FGF acidic in Human Brain. FGF acidic was detected in immersion fixed paraffin-embedded sections of human brain using Mouse Anti-Human FGF acidic Monoclonal Antibody (Catalog # MAB2321) at 5 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to neuronal cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.</p>
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PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

FGF acidic, also known as FGF-1, 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 crossreactivity. 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).

References:

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