R&D SYSTEMS
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Human FGF-19 Antibody

Monoclonal Mouse IgG_1 Clone # 117601

Catalog Number: MAB969

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF-19 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) FGF acidic, rhFGF basic, rhFGF-4, -5, -6, -7, -9, -10, -17, -18, recombinant mouse FGF-8b, -8c, or -15 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 117601
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human FGF-19 Phe27-Lys216 Accession # O95750
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 as a 0.2 µm filtered solution in PBS.

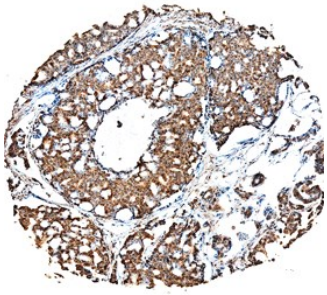
APPLICATIONS

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	Recombinant Human FGF−19 (Catalog # 969-FG)
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



FGF-19 in Human Prostate Cancer Tissue.

FGF-19 was detected in immersion fixed paraffin-embedded sections of human prostate cancer tissue using Mouse Anti-Human FGF-19 Monoclonal Antibody (Catalog # MAB969) at 15 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 cytoplasm in cancer cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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.** ● 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

BACKGROUND

Fibroblast growth factor 19 (FGF-19) belongs to the large FGF family which has at least 23 members (1, 2). All FGF family members are heparin-binding growth factors with a core 120 amino acid (aa) FGF domain that allows for a common tertiary structure. FGFs are expressed during embryonic development and in restricted adult tissues. They act on cells of mesodermal and neuroectodermal origin to regulate diverse physiologic functions including angiogenesis, cell growth, pattern formation, embryonic development, metabolic regulation, cell migration, neurotrophic effects and tissue repair (3, 4). Signaling receptors for FGFs are type I transmembrane receptor tyrosine kinases belonging to the Ig superfamily. Four distinct but related classes of FGF receptors, FGF R1, 2, 3, and 4, exist. Through alternative splicing, multiple isoforms for FGF R1, 2 and 3, with distinct ligand recognition profiles, are also generated (4).

Human FGF-19 cDNA predicts a 251 aa precursor protein with a 22 aa signal peptide and a 229 aa secreted mature protein with no potential N-linked glycosylation sites (1, 2). Among FGF family members, human FGF-19 is most closely related to chicken FGF-19 and murine FGF-15, sharing approximately 61% and 51% aa sequence identity, respectively (1, 2, 5). Neither the human orthologue of mouse FGF-15, nor the mouse counterpart of human FGF-19 has been identified. With the exception of adult gall bladder epithelium, FGF-19 expression is restricted to fetal tissues (1, 2). Unlike most FGFs which bind to and activate more than one FGF receptor, FGF-19 is a specific ligand for FGF R4 (2). Similarly, another FGF family member, FGF-7 (KGF), only activates KGF R, the IIIb isoform of FGF R2 (4). During chick embryogenesis, FGF-19 has been shown to act synergistically with Wnt-8c to initiate inner ear development (5).

References:

1. Nishimura, T. *et al*. (1999) Biocheim. Biophys. Acta **1444**:148.
2. Xie, M. *et al*. (1999) Cytokine **11**:729.
3. Goldfarb, M. (1996) Cytokine & Growth Factor Reviews **7**:311.
4. Green, P. *et al*. (1996) BioEssays **18**:639.
5. Ladher, R.K. *et al*. (2000) Science **290**:1965.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956