Human FGF-19 Antibody

Antigen Affinity-purified Polyclonal Goat IgG

Catalog Number: AF969

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF-19 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with recombinant human (rh) FGF acidic, rhFGF basic, rhFGF-4, rhFGF-5, rhFGF-6, rhFGF-7, recombinant mouse (rm) FGF-8b, rmFGF-8c, rhFGF-9, rhFGF-10, rmFGF-15, rhFGF-17, and rhFGF-18 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human FGF-19 Phe27-Lys216 Accession # O95750
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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.

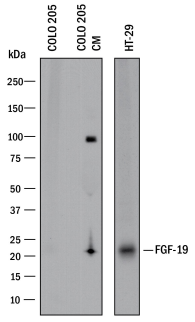
APPLICATIONS

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	0.5 µg/mL	See Below
Simple Western	10 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 2-8 µg/mL of this antibody will block 50% of the binding of 250 ng/mL of Recombinant Human FGF-19 (Catalog # 969-FG) to immobilized Recombinant Human FGF R4 Fc Chimera (Catalog # 685-FR) coated at 2 µg/mL (100 µL/well). At 10 µg/mL, this antibody will block >90% of the binding.	

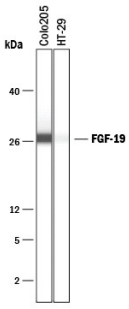
DATA

Western Blot



Detection of Human FGF-19 by Western Blot. Western blot shows lysates of COLO 205 human colorectal adenocarcinoma cell line, conditioned media from COLO 205 cell line, and HT-29 human colon adenocarcinoma cell line. PVDF membrane was probed with 0.5 µg/mL of Goat Anti-Human FGF-19 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF969) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for FGF-19 at approximately 22 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Simple Western



Detection of Human FGF-19 by Simple Western™. Simple Western lane view shows conditioned media from COLO 205 human colorectal adenocarcinoma cell line and HT-29 human colon adenocarcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for FGF-19 at approximately 26 kDa (as indicated) using 10 µg/mL of Goat Anti-Human FGF-19 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF969) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 2-40 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.

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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:

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5. Ladher, R.K. *et al.* (2000) Science **290**:1965.

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