

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human FGF-19 in direct ELISAs and Western blots. Shows approximately 10% cross-reactivity with recombinant human (rh) FGF-3 and rhFGF-5 and no cross-reactivity with rhFGF-4, rhFGF-6, rhFGF-7, rhFGF-9, rhFGF-10, rhFGF-13, rhFGF-16, rhFGF-17, rhFGF-18, rhFGF acidic, and rhFGF basic.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 117611
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human FGF-19 Phe27-Lys216 Accession # O95750
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the antibody by the LAL method.
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	Recombinant Human FGF-19 (Catalog # 969-FG) under non-reducing conditions only
<b>Human FGF-19 Sandwich Immunoassay</b>		<b>Reagent</b>
<b>ELISA Capture</b>	2-8 µg/mL	Human FGF-19 Antibody (Catalog # MAB9691)
<b>ELISA Detection</b>	0.1-0.4 µg/mL	Human FGF-19 Biotinylated Antibody (Catalog # BAF969)
<b>Standard</b>		Recombinant Human FGF-19 (Catalog # 969-FG)
<b>Blockade of Receptor-ligand Interaction</b>	In a functional ELISA, 0.7-4 µg/mL of this antibody will block 50% of the binding of 400 ng/mL of Recombinant Human FGF-19 (Catalog # 969-FG) to immobilized Recombinant Human FGF R4 Fc Chimera (Catalog # 685-FR) coated at 5 µg/mL (100 µL/well). At 10 µg/mL, this antibody will block >90% of the binding.	

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 mg/mL in sterile PBS.
<b>Shipping</b>	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
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## 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) *Biochem. 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.