

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human FGF-5 in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human (rh) FGF-4, rhFGF-6, rhFGF-7, recombinant mouse FGF-8b, rhFGF-9, rhFGF acidic, and rhFGF basic is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human FGF-5 Glu23-Gly268 (Lys238Asn, Pro245Ser) Accession # Q8NF90
<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.

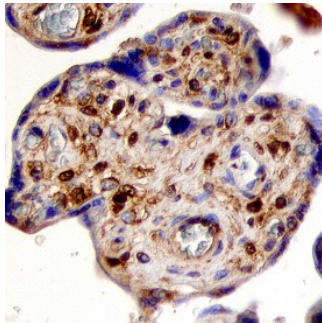
#### APPLICATIONS

**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>	0.1 µg/mL	Recombinant Human FGF-5 (Catalog # 237-F5)
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Neutralization</b>	Measured by its ability to neutralize FGF-5-induced proliferation in the NR6R-3T3 mouse fibroblast cell line. Rizzino, A. <i>et al.</i> (1988) <i>Cancer Res.</i> <b>48</b> :4266. The Neutralization Dose (ND <sub>50</sub> ) is typically 0.2-0.8 µg/mL in the presence of 20 ng/mL Recombinant Human FGF-5 and 1 µg/mL heparin.	

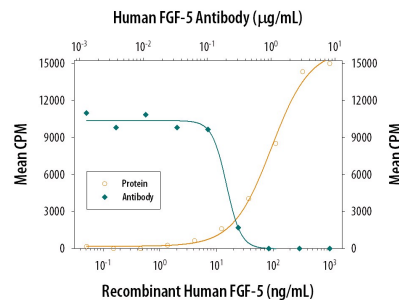
#### DATA

##### Immunohistochemistry



**FGF-5 in Human Placenta.** FGF-5 was detected in immersion fixed paraffin-embedded sections of human placenta using Goat Anti-Human FGF-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-237-NA) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to trophoblast cells in chorionic villi. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

##### Neutralization



**Cell Proliferation Induced by FGF-5 and Neutralization by Human FGF-5 Antibody.** Recombinant Human FGF-5 (Catalog # 237-F5) stimulates proliferation in the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human FGF-5 (20 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human FGF-5 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-237-NA). The ND<sub>50</sub> is typically 0.2-0.8 µg/mL in the presence of heparin (1 µg/mL).

#### PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 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.
<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

The FGF family is comprised of at least seven polypeptides that are potent regulators of cell proliferation, differentiation and function. All FGFs have two conserved cysteine residues and share 30-50% sequence homology at the amino acid level. FGF-5 was originally identified as a transforming gene by the NIH-3T3 focus formation assay using DNA derived from human tumors. FGF-5 cDNA encodes a 267 amino acid residue protein with a putative 22 amino acid residue signal peptide. The murine homologue of FGF-5 was cloned and found to be 84% homologous to the human protein at the amino acid sequence level. Human and murine FGF-5 exhibit cross species activity.

*In vitro*, recombinant human FGF-5 is a mitogen for Balb/3T3 fibroblasts and bovine heart endothelial cells. FGF-5 was also reported to be a major muscle-derived survival factor for cultured spinal motoneurons. *In vivo*, FGF-5 is suggested to play important roles in both embryology and neurobiology. Developmentally, FGF-5 mRNA is initially found in the embryoblast followed by the lateral somatic mesoderm, where it may play a role in angiogenesis, plus the myotomes cranial to the tail region, where it may delay terminal myoblast differentiation during cell migration. FGF-5 continues to impact muscle post-natally where it is believed to function as a target-derived neurotrophic factor of skeletal muscle. In the nervous system, FGF-5 has been most often identified in neurons associated with the limbic system, notably in neurons of the olfactory bulb and pyramidal cells of the hippocampus. Hippocampal FGF-5 is suggested to serve as a neurotrophic and differentiative factor for cholinergic and serotonergic neurons projecting to this region.