

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human KGF/FGF-7 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 20% cross-reactivity with recombinant human (rh) FGF-9 is observed and less than 10% cross-reactivity with rhFGF-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human KGF/FGF-7 Cys32-Thr194 Accession # Q6FGV5
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.

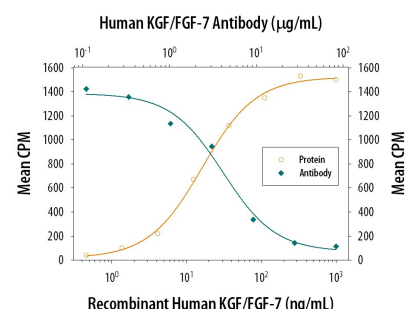
APPLICATIONS

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	0.1 µg/mL	Recombinant Human KGF/FGF-7 (Catalog # 251-KG)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize KGF/FGF-7-induced proliferation in the 4MBR-5 rhesus monkey epithelial cell line. The Neutralization Dose (ND ₅₀) is typically 6-12 µg/mL in the presence of 125 ng/mL Recombinant Human KGF/FGF-7.	

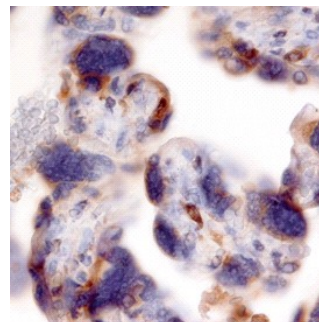
DATA

Neutralization



Cell Proliferation Induced by KGF/FGF-7 and Neutralization by Human KGF/FGF-7 Antibody. Recombinant Human KGF/FGF-7 (Catalog # 251-KG) stimulates proliferation in the 4MBR-5 rhesus monkey epithelial cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human KGF/FGF-7 (125 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Human KGF/FGF-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-251-NA). The ND₅₀ is typically 6-12 µg/mL.

Immunohistochemistry



KGF/FGF-7 in Human Placenta.

KGF/FGF-7 was detected in immersion fixed paraffin-embedded sections of human placenta (chorionic villi) using Goat Anti-Human KGF/FGF-7 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-251-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](#).

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <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

KGF (keratinocyte growth factor), also known as FGF-7 (fibroblast growth factor-7), is one of 22 known members of the mouse FGF family of secreted proteins that plays a key role in development, morphogenesis, angiogenesis, wound healing, and tumorigenesis (1-4). KGF expression is restricted to cells of mesenchymal origin. When secreted, it acts as a paracrine growth factor for nearby epithelial cells (1). KGF speeds wound healing by being dramatically upregulated in response to damage to skin or internal structures that results in high local concentrations of inflammatory mediators such as IL-1 and TNF- α . (2, 5). KGF promotes cell migration and invasion, and mediates melanocyte transfer to keratinocytes upon UVB radiation (6, 7). It has been used ectopically to avoid chemotherapy-induced oral mucositis in patients with hematological malignancies (1). Deletion of KGF affects kidney development, producing abnormally small ureteric buds and fewer nephrons (8). It also impedes hair follicle differentiation (9). The 194 amino acid (aa) KGF precursor contains a 31 aa signal sequence and, like all other FGFs, an ~120 aa β -trefoil scaffold that includes receptor- and heparin-binding sites. KGF signals only through the IIIb splice form of the tyrosine kinase receptor, FGF R2 (FGF R2-IIIb/KGF R) (10). Receptor dimerization requires an octameric or larger heparin or heparin sulfate proteoglycan (11). FGF-10, also called KGF2, shares 51% aa identity and similar function to KGF, but shows more limited expression than KGF and uses an additional receptor, FGF R2-IIIc (12). Following receptor engagement, KGF is typically degraded, while FGF-10 is recycled (12). Mature human KGF, which is active across species, shares 98% aa sequence identity with bovine, equine, ovine and canine, 96% with mouse and porcine, and 92% with rat KGF, respectively.

References:

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