

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse FGF-8b Isoform 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 and rhFGF-9 is observed. It does, however, cross-react with recombinant mouse FGF-8c in neutralizing bioassay.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse FGF-8b Gln23-Arg215 Accession # NP_006110
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	0.1 µg/mL	Recombinant Mouse FGF-8b Isoform (Catalog # 423-F8)
Immunohistochemistry	5-15 µg/mL	See Below
Neutralization	Measured by its ability to neutralize FGF-8-induced proliferation in the NR6R-3T3 mouse fibroblast cell line. Rizzino, A. <i>et al.</i> (1988) <i>Cancer Res.</i> 48 :4266. The Neutralization Dose (ND ₅₀) is typically 0.4-2.4 µg/mL in the presence of 60 ng/mL Recombinant Mouse FGF-8b Isoform and 1 µg/mL heparin.	

DATA

Neutralization

Cell Proliferation Induced by FGF-8 and Neutralization by Mouse FGF-8 Antibody. Recombinant Mouse FGF-8b Isoform (Catalog # 423-F8) stimulates proliferation in the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line), as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Mouse FGF-8b Isoform (60 ng/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse FGF-8b Isoform Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-423-NA). The ND₅₀ is typically 0.4-2.4 µg/mL in the presence of heparin (1 µg/mL).

Immunohistochemistry

FGF-8 in Human Prostate. FGF-8 was detected in immersion fixed paraffin-embedded sections of human prostate using Goat Anti-Mouse FGF-8 b Isoform Antigen Affinity-purified Polyclonal Antibody (Catalog # AF-423-NA) at 15 µg/mL overnight at 4 °C. 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 epithelial and endothelial cells. 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. *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. <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

FGF-8 is a member of the fibroblast growth factor family that was originally discovered as a growth factor essential for the androgen-dependent growth of mouse mammary carcinoma cells (1-3). Alternate splicing of mouse FGF-8 mRNA generates eight secreted isoforms, designated a-h, but only FGF-8a, b, e and f exist in humans (4). FGF-8 contains a 22 amino acid (aa) signal sequence, an N-terminal domain that varies according to the isoform (30 aa for FGF-8b; 20 aa for the shortest, FGF-8a), a 125 aa FGF domain and a 37 aa proline-rich C-terminal sequence. The FGF domain of FGF-8 shares the most aa identity with FGF17 (75%) and FGF-18 (67%), and the three form an FGF subfamily (2). Mouse FGF-8b shares 100% aa identity with human FGF-8b. FGF-8 is widely expressed during embryogenesis, and mediates epithelial-mesenchymal transitions. It plays an organizing and inducing role during gastrulation, and regulates patterning of the midbrain/hindbrain, eye, ear, limbs and heart in the embryo (2, 5-8). The isoforms may play different roles in development. FGF-8b shows the strongest receptor affinity and oncogenic transforming capacity although FGF-8a and FGF-8e are also transforming and have been found in human prostate, breast or ovarian tumors (1, 5, 9-12). FGF-8 shows limited expression in the normal adult, but low levels are found in the reproductive and genitourinary tract, peripheral leukocytes and bone marrow hematopoietic cells (3, 9, 13).

References:

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