Human/Mouse FGF-8 Antibody

Monoclonal Mouse IgG_1 Clone # 47109

Catalog Number: MAB323

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse FGF-8 in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 2% cross-reactivity with recombinant human (rh) FGF-5, rhFGF-7, and rhFGF-9 is observed.
Source	Monoclonal Mouse IgG_1 Clone # 47109
Purification	Protein A or G purified from ascites
Immunogen	*E. coli*-derived recombinant mouse FGF-8b Gln23-Arg215 Accession # NP_001159834
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 as a 0.2 µm filtered solution in PBS.

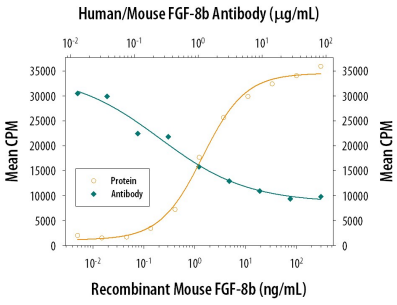
APPLICATIONS

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	1 µg/mL	Recombinant Human FGF-8a (Catalog # 4745-F8) Recombinant Mouse FG-8b (Catalog # 423-F8) Recombinant Mouse FGF-8c (Catalog # 424-FC) Recombinant Human FGF-8e (Catalog # 4746-F8) Recombinant Human FGF-8f (Catalog # 5027-FF)
Immunohistochemistry	8-25 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. *et al.* (1988) Cancer Res. **48**:4266. The Neutralization Dose (ND_{50}) is typically 0.25-0.75 µg/mL in the presence of 125 ng/mL Recombinant Mouse FGF-8 c Isoform and 0.1 µg/mL heparin.	

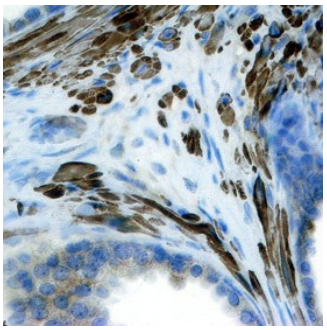
DATA

Neutralization



Cell Proliferation Induced by FGF-8 and Neutralization by Human and Mouse FGF-8 Antibody.
Recombinant Mouse FGF-8 c Isoform (Catalog # 424-FC) stimulates proliferation in the the NR6R-3T3 mouse fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Mouse FGF-8 c Isoform (125 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human/Mouse FGF-8 Monoclonal Antibody (Catalog # MAB323). The ND_{50} is typically 0.25-0.75 µg/mL in the presence of heparin (0.1 µg/mL).

Immunohistochemistry



FGF-8 in Human Prostate.
FGF-8 was detected in immersion fixed paraffin-embedded sections of human prostate using Mouse Anti-Human/Mouse FGF-8 Monoclonal Antibody (Catalog # MAB323) at 25 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to stromal cell cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Human/Mouse FGF-8 Antibody

Monoclonal Mouse IgG_1 Clone # 47109

Catalog Number: MAB323

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:

1. Mattila, M.M. and P.L. Harkonen (2007) Cytokine Growth Factor Rev. **18**:257.
2. Reuss, B. and O. von Bohlen und Halbach (2003) Cell Tiss. Res. **313**:139.
3. Tanaka, A. *et al.* (1992) Proc. Natl. Acad. Sci. USA **89**:8928.
4. Gemel, J. *et al.* (1996) Genomics **35**:253.
5. Olsen, S.K. *et al.* (2006) Genes Dev. **20**:185.
6. Crossley, P.H. *et al.* (1996) Cell, **84**:127.
7. Heikinheimo, M. *et al.* (1994) Mech. Dev. **48**:129.
8. Sun, X. *et al.* (1999) Genes Dev. **13**:1834.
9. Ghosh, A.K. *et al.* (1996) Cell Growth Differ. **7**:1425.
10. Mattila, M.M. *et al.* (2001) Oncogene **20**:2791.
11. Valve, E. *et al.* (2000) Int. J. Cancer **88**:718.
12. Valve, E.M. *et al.* (2001) Lab. Invest. **81**:815.
13. Nezu, M. *et al.* (2005) Biochem. Biophys. Res. Commun. **335**:843.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 **Europe | Middle East | Africa** TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956