Human FGF-22 Antibody

Monoclonal Mouse IgG_{2A} Clone # 435008

Catalog Number: MAB3867

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF-22 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant human (rh) FGF-basic, rhFGF-3, -4, -5, -6, -7, -9, -10, -11, -12, -13, -16, -17, -18, -19, -20, -21, -23, recombinant mouse (rm) FGF-basic, rmFGF-8C, or -15 is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 435008
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human FGF-22 Thr23-Ser170 Accession # Q9HCT0
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.

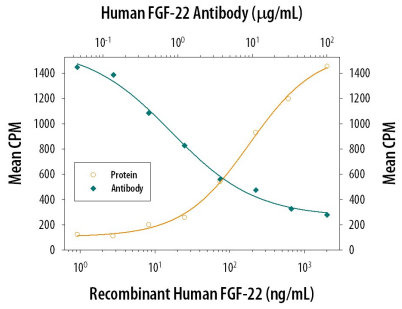
APPLICATIONS

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	1 µg/mL	Recombinant Human FGF-22 (Catalog # 3867-FG)
Neutralization	Measured by its ability to neutralize FGF-22-induced proliferation in the 4MBr-5 rhesus monkey epithelial cell line. The Neutralization Dose (ND_{50}) is typically 1.5-7.5 µg/mL in the presence of 1 µg/mL Recombinant Human FGF-22.	

DATA

Neutralization



Cell Proliferation Induced by FGF-22 and Neutralization by Human FGF-22 Antibody. Recombinant Human FGF-22 (Catalog # 3867-FG) stimulates proliferation in the 4MBr-5 rhesus monkey epithelial cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human FGF-22 (1 µg/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human FGF-22 Monoclonal Antibody (Catalog # MAB3867). The ND_{50} is typically 1.5-7.5 µg/mL.

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®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Human FGF-22 Antibody

Monoclonal Mouse IgG_{2A} Clone # 435008

Catalog Number: MAB3867

BACKGROUND

Fibroblast growth factor-22 (FGF-22) is a 23 kDa, non-glycosylated member of the FGF-7 subfamily, from the FGF family of heparin-binding growth factors (1-3). The human FGF-22 precursor is 170 amino acids (aa) in length, and contains a 22 aa signal sequence with a 148 aa mature region (4-6). The mature region shows a centrally-placed, 120 aa β-trefoil region (aa 43-168) that is characteristic of all FGF family members. Human FGF-22 potentially has one alternate splice form. This isoform is 129 aa in length, and shows a 31 aa substitution for the first N-terminal 72 aa of the standard, or long, form (7). There is no information related to its possible function. Mature human FGF-22 is 86% aa identical to mouse FGF-22, with the mouse molecule showing a 9 aa deletion at the N-terminus (5). FGF-22 is synthesized by at least three cell types; keratinocytes, neurons, and skeletal muscle myotubes (4, 8, 9). In neurons and myotubes, FGF-22 is presumed to function as an organizer of the presynaptic apparatus. Expressed by postsynaptic (or target) cells, FGF-22 is believed to bind to FGF R2b on the surface of innervating processes, resulting in synaptic vesicle clustering, organization, and neurite branching (8, 10). Although FGF-22 is assumed to be secreted, little can be found in expressing cell culture media. Presumably, it is bound to 34 kDa FGF-BP1, which is a molecule described as typically associated with cell membrane proteoglycans (6, 11). Thus, following secretion, FGF-22 could quickly be immobilized by FGF-BP1, only to be released at a later time, or aided by FGF-BP1 in its interaction with FGF R2b (6, 10, 11).

References:

1. Itoh, N. and D.M. Ornitz (2004) Trends Genet. **20**:563.
2. Ornitz, D.M. and N. Itoh (2001) Genome Biol. **2**:3005.1 Epub 2001 Mar 9.
3. Nishimura, T. *et al.* (2000) Biochim. Biophys. Acta **1492**:203.
4. Beyer, T.A. *et al.* (2003) Exp. Cell Res. **287**:228.
5. Nakatake, Y. *et al.* (2001) Biochim. Biophys. Acta **1517**:460.
6. Beer, H-D. *et al.* (2005) Oncogene **24**:5269.
7. GenBank Accession # EAW61176.
8. Fox, M.A. and H. Umemori (2006) J. Neurochem. **97**:1215.
9. Umemori, H. *et al.* (2004) Cell **118**:257.
10. Zhang, X. *et al.* (2006) J. Biol. Chem. **281**:15694.
11. Xie, B. *et al.* (2006) J. Biol. Chem. **281**:1137.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449