Human FGF R4 Antibody

Monoclonal Rat IgG_{2A} Clone # 240929

Catalog Number: MAB6852

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF R4 in direct ELISAs and Western blots. In Western blots, less than 5% cross-reactivity with recombinant mouse FGF R4 and recombinant human FGF R5 is observed and no cross-reactivity with any isoform of rhFGF R1, rhFGF R2, or rhFGF R3 is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 240929
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human FGF R4 Leu22-Asp369 (predicted) Accession # P22455
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.

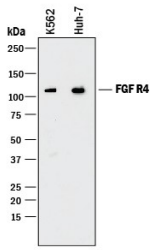
APPLICATIONS

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	0.2 µg/mL	See Below
Flow Cytometry	2.5 µg/10^6 cells	MCF-7 human breast cancer cell line
Immunocytochemistry	8-25 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

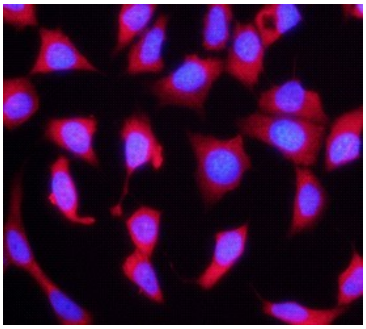
DATA

Western Blot



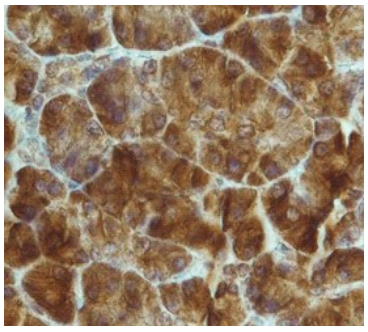
Detection of Human FGF R4 by Western Blot. Western blot shows lysates of K562 human chronic myelogenous leukemia cell line and Huh-7 human hepatoma cell line. PVDF membrane was probed with 0.2 µg/mL of Rat Anti-Human FGF R4 Monoclonal Antibody (Catalog # MAB6852) followed by HRP-conjugated Anti-Rat IgG Secondary Antibody (Catalog # HAF005). A specific band was detected for FGF R4 at approximately 110 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



FGF R4 in MCF-7 Human Cell Line. FGF R4 was detected in immersion fixed MCF-7 human breast cancer cell line using Rat Anti-Human FGF R4 Monoclonal Antibody (Catalog # MAB6852) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

Immunohistochemistry



FGF R4 in Human Pancreas. FGF R4 was detected in immersion fixed paraffin-embedded sections of human pancreas using Rat Anti-Human FGF R4 Monoclonal Antibody (Catalog # MAB6852) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS017) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

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Human FGF R4 Antibody

Monoclonal Rat IgG_{2A} Clone # 240929

Catalog Number: MAB6852

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.

BACKGROUND

Fibroblast growth factors (FGFs) comprise a family of at least eighteen structurally related proteins that are involved in a multitude of physiological and pathological cellular processes, including cell growth, differentiation, angiogenesis, wound healing and tumorgenesis. The biological activities of the FGFs are mediated by a family of type I transmembrane tyrosine kinases which undergo dimerization and autophosphorylation after ligand binding. Four distinct genes encoding closely related FGF receptors, FGF R1-4, are known. All four genes for FGF Rs encode proteins with an N-terminal signal peptide, three immunoglobulin (Ig)-like domains, an acid-box region containing a run of acidic residues between the IgI and IgII domains, a transmembrane domain and the split tyrosine-kinase domain. Multiple forms of FGF R1-3 are generated by alternative splicing of the mRNAs. A frequent splicing event involving FGF R1 and 2 results in receptors containing all three Ig domains, referred to as the α isoform, or only IgII and IgIII, referred to as the β isoform. Only the α isoform has been identified for FGF R3 and FGF R4. Additional splicing events for FGF R1-3, involving the C-terminal half of the IgIII domain encoded by two mutually exclusive alternative exons, generate FGF receptors with alternative IgIII domains (IIIb and IIIc). A IIIa isoform which is a secreted FGF binding protein containing only the N-terminal half of the IgIII domain plus some intron sequences has also been reported for FGF R1. Mutations in FGF R1-3 have been found in patients with birth defects involving craniosynostosis. The complex patterns of expression of these receptors as well as the specificity of their interactions with the various FGF ligand family members are under investigation.

References:

1. Galzie, Z. *et al.* (1997) Biochem. Cell Biol. **75**:669.
2. Burke, D. *et al.* (1998) Trends Biochem. Sci. **23**:59.

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