Human FGF-9 Antibody

Monoclonal Mouse IgG_{2A} Clone # 36912

Catalog Number: MAB273

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human FGF-9 in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant human (rh) FGF-4, 5, 6, 7, 16, rhFGF acidic, or rhFGF basic is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 36912
Purification	Protein A or G purified from ascites
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human FGF-9 Met1-Ser208 Accession # P31371
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

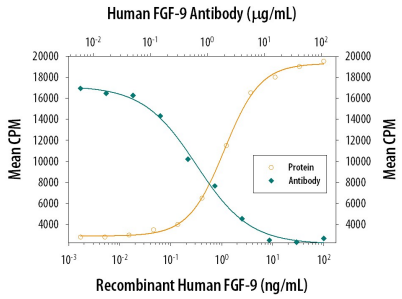
Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Human FGF-9 Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Human FGF-9 Antibody (Catalog # MAB273)
ELISA Detection	0.1-0.4 µg/mL	Human FGF-9 Biotinylated Antibody (Catalog # BAF273)
Standard		Recombinant Human FGF-9 (Catalog # 273-F9)

Neutralization	Measured by its ability to neutralize FGF-9-induced proliferation in the Balb/3T3 mouse embryonic fibroblast cell line. The Neutralization Dose (ND_{50}) is typically 0.1-0.6 µg/mL in the presence of 10 ng/mL Recombinant Human FGF-9.

DATA

Neutralization



Cell Proliferation Induced by FGF-9 and Neutralization by Human FGF-9 Antibody. Recombinant Human FGF-9 (Catalog # 273-F9) stimulates proliferation in the Balb/3T3 mouse embryonic fibroblast cell line in a dose-dependent manner (orange line). Proliferation elicited by Recombinant Human FGF-9 (10 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human FGF-9 Monoclonal Antibody (Catalog # MAB273). The ND_{50} is typically 0.1-0.6 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.

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BACKGROUND

The FGF family is comprised of at least nine polypeptides that show a variety of biological activities toward cells of mesenchymal, neuronal and epithelial origin. All FGFs have two conserved cysteine residues and share 30-50% sequence identity at the amino acid level. FGF-9, also named glia-activating factor, was originally identified and purified from the supernatant of a human glioma cell line as a heparin-binding mitogenic growth factor for glial cells. FGF-9 has also been shown to stimulate the proliferation of oligodendrocyte type 2 astrocyte progenitor cells, Balb/c3T3 fibroblasts and PC-12 cells. However, unlike FGF acidic and basic, FGF-9 is not a mitogen for human umbilical vein endothelial cells.

The human FGF-9 cDNA encodes a 208 amino acid residue protein that contains a potential N-linked glycosylation site. The native protein is glycosylated. FGF-9 exhibits approximately 30% sequence similarity to other members of the FGF family. Although FGF-9 lacks a typical secretion signal, the protein is secreted efficiently after synthesis. Rat FGF-9 cDNA has been cloned and shown to be highly homologous to human FGF-9. The two proteins differ only in one amino acid residue. The expression of the FGF-9 transcripts has been shown to be restricted to the brain and the kidney.

References:

1. Naruo, K. *et al.* (1993) J. Biol. Chem. **268**:2857.
2. Miyamoto, M. *et al.* (1993) Mol. Cell Biol. **13**:4251.

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