

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse FGF-4 in direct ELISAs. In direct ELISAs, 10% - 50% cross-reactivity with recombinant mouse (rm) FGF-10, rmFGF-7, recombinant human (rh) FGF-16, rhFGF-20 and less than 5% cross-reactivity with rmFGF acidic, rmFGF basic, rmFGF-6, -8b, -
Source	Monoclonal Rat IgG _{2B} Clone # 678431
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant mouse FGF-4 Ala30-Leu202 Accession # NP_034332
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Immunohistochemistry Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

FGF-4 (fibroblast growth factor-4), also known as FGF-K or K-FGF (Kaposi's sarcoma-associated FGF), is a 25 kDa secreted, heparin-binding member of the FGF family (1, 2). The mouse FGF-4 cDNA encodes 202 amino acids (aa) with a 29 aa signal sequence and a 173 aa mature protein with an FGF homology domain that contains a heparin binding region near the C-terminus (2). Mature mouse FGF-4 shares 87%, 90%, 87% and 85% aa identity with human, rat, canine and bovine FGF-4, respectively. Human FGF-4 has been shown to exhibit cross species activity. Expression of FGF-4 and its receptors, FGF R1c, 2c, 3c and 4, is spatially and temporally regulated during embryonic development (1, 3). Its expression in the trophoblast inner cell mass promotes expression of FGF R2, and is required for maintenance of the trophectoderm and primitive endoderm (3-5). Later in development, FGF-4 works together with FGF-8 to mediate the activities of the apical ectodermal ridge, which direct the outgrowth and patterning of vertebrate limbs (3, 6-9). FGF-4 is proposed to play a physiologically relevant role in human embryonic stem cell self-renewal. It promotes stem cell proliferation, but may also aid differentiation depending on context and concentration, and is often included in embryonic stem cell media *in vitro* (10-12). A C-terminally truncated 15 kDa isoform that opposes full-length FGF-4 and promotes differentiation is endogenously expressed in human embryonic stem cells. FGF-4 is mitogenic for fibroblasts and endothelial cells *in vitro* and has autocrine transforming potential (13). It is a potent angiogenesis promoter *in vivo* and has been investigated as therapy for coronary artery disease (14).

PRODUCT SPECIFIC NOTICES

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