

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse FGF-4 in direct ELISAs. In direct ELISAs, approximately 60% cross-reactivity with recombinant human FGF-4 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse FGF-4 Ala30-Leu202 Accession # P11403
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
Immunohistochemistry	5-15 µg/mL	Immersion fixed frozen sections of mouse embryo

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
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. <ul style="list-style-type: none"> ● 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

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).

References:

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