

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse GDF-9 in direct ELISAs.
Source	Monoclonal Rat IgG _{2A} Clone # 785123
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant mouse GDF-9 Met1-Arg441 Accession # Q07105
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 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.

Neutralization 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

Growth differentiation factor-9 (GDF-9) is a member of the transforming growth factor- β (TGF- β) superfamily, and is an oocyte secreted paracrine factor essential for mammalian ovarian folliculogenesis (1-2). Mouse GDF-9 is synthesized as a 441 amino acid (aa) prepropeptide that contains a 29 aa signal sequence, a 277 aa propeptide, and a 135 aa mature chain. Residues 340-441 constitute a TGF- β like domain. In addition, there is one potential site of N-linked glycosylation in the mature chain. Unlike other members of the TGF- β superfamily, GDF-9 lacks the conserved cysteine residue that is believed to form the sole disulfide linkage between subunits in other family members (3). Mature mouse GDF-9 shares 90% aa sequence identity with mature human GDF 9. The protein is expressed throughout the development of the maturing follicle (2). GDF-9 functions as a paracrine factor in the regulation of granulosa cell proliferation and differentiation, and is essential for fertility (2, 4). Studies on GDF-9 null mice have demonstrated arrested follicular development at the primary follicle stage (5). Mouse GDF-9 induces Smad2 phosphorylation and inhibin production in rat diethylstilbestrol treated granulosa cells (6) and in human granulosa-luteal cells (7). The downstream signaling actions of GDF 9 are mediated by the type I receptor, activin receptor-like kinase 5 (ALK5), initiating the subsequent activation of Smad2 and Smad3 (2, 8). GDF 9 uses the BMP type II receptor (BMPRII) as its other signaling receptor (2, 9).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc, and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.