

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 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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).

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