Mouse GDF-9 Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3536G
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse GDF-9 Propeptide in direct ELISAs and Western blots. In direct ELISAs and Western blots, less than 1% cross-reactivity with mature recombinant mouse (rm) GDF-9, rmGDF-1 propeptide, and rmGDF-3 propeptide is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse GDF-9 Propeptide Glu30-Arg304 Accession # AAA53035
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.*

Western Blot	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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