

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse GDF-3 Propeptide in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant mouse (rm) GDF-1, rmGDF-1pro, rmGDF-3, rmGDF-5, rmGDF-6, rmGDF-7, rmGDF-8, or rmGDF-9 is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 356613
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse GDF-3 Propeptide Ser23-Lys250 Accession # Q3ZB19
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.

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

GDF-3 (previously called Vgr-2) is a TGF-β superfamily member belonging to the growth/differentiation factor family (1, 2). GDF-3 is expressed in undifferentiated embryonic stem (ES) cells, adipose tissue and the brain (2-4). In ES cells, it maintains pluripotency and influences early cell fate decisions (5, 6). For example, frog embryos injected with GDF-3 develop a secondary dorsal axis and deletion of mouse GDF-3 can produce defects in the anterior visceral endoderm of the pre-gastrulation embryo (5, 6). In adipocytes, GDF-3 is induced by a high fat diet and promotes adipogenesis (3). GDF-3 has been reported to oppose BMP's functions and to have a nodal-like activity in early development (1). The 366 amino acid (aa) mouse GDF-3 contains a 22 aa signal sequence, a 230 aa propeptide and a 114 aa mature protein that contains one potential N-glycosylation site. Most of GDF-3 is present as the prepro form, while the mature GDF-3 is presumably the secreted, active form (1). The mature protein contains the cysteine-knot structure that is conserved throughout family members. Since it lacks the fourth cysteine, which is responsible for the formation of inter-molecular disulfide bond, GDF-3 may exist as a non-covalent homodimer. Within the pro region, mouse and human GDF-3 share 65% aa sequence identity. Among family members, mature GDF-3 is most similar to mouse BMP-6 (45% aa identity) and *Xenopus* VG-1 (52% aa identity).

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.