Mouse GDF-3 Alexa Fluor® 594-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 356613

Catalog Number: FAB3719T

100 µg

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 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.*

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).

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