

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Gremlin in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant chicken Caronte, recombinant human (rh) Cerberus, rhCOCO, rhGremlin, rhBMP-2, rhBMP-4, recombinant mouse (rm) DAN, rmPRDC, rmSlit1, rmSlit2, or
Source	Monoclonal Rat IgG _{2A} Clone # 155606
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Gremlin Lys25-Asp184 Accession # O70326
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	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

Gremlin was identified in a *Xenopus* expression-cloning screen as a dorsalizing factor that can induce a secondary axis. A rat homolog, called Drm, was identified as a cDNA that was downregulated in v-mos transfected cells. Gremlin/Drm belongs to the DAN family of secreted glycoproteins that are BMP antagonists. Other members of the family include: Cerberus, Dante, PRDC, Caronte, and DAN. DAN family members share a cysteine-rich domain that is structurally related to the cysteine-knot motif found in TGF-β superfamily ligands. In vitro, Gremlin/Drm binds BMP-4 and BMP-2 indicating that it might interfere with BMP signaling. Gremlin/Drm acts as a BMP-2/4 antagonist in a variety of tissues and developmental processes including: *Xenopus* animal cap explants, chick limb bud outgrowth and chondrogenesis, murine lung branching morphogenesis, and osteogenic differentiation of mouse myoblasts and bone marrow stromal cells. In addition, expression of Gremlin/Drm has been shown to be downregulated in a wide range of human cancer cell lines. Mouse, human, chick and *Xenopus* homologs of Gremlin share over 80% amino acid identity. It is likely that various DAN family members and other BMP antagonists including Noggin, Chordin, Follistatin and TSG can selectively antagonize the activities of different subsets of TGF-β superfamily ligands.

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.