

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects mouse PRDC in ELISAs and Western blots. In sandwich ELISAs, less than 0.1% cross-reactivity with recombinant mouse (rm) Cerberus, rmGremlin, rmDAN, recombinant human (rh) COCO, rhGremlin, and rmBMP-4 is observed.                                                |
| <b>Source</b>             | Polyclonal Goat IgG                                                                                                                                                                                                                                                         |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant mouse PRDC<br>Arg22-Gln168<br>Accession # O88273                                                                                                                                                                                        |
| <b>Conjugate</b>          | Alexa Fluor 350<br>Excitation Wavelength: 346 nm<br>Emission Wavelength: 442 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*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.

|                                                |                                                                        |
|------------------------------------------------|------------------------------------------------------------------------|
| <b>ELISA Capture (Matched Antibody Pair)</b>   | Optimal dilution of this antibody should be experimentally determined. |
| <b>ELISA Detection (Matched Antibody Pair)</b> | Optimal dilution of this antibody should be experimentally determined. |
| <b>Western Blot</b>                            | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

PRDC (protein related to DAN and Cerberus) is a secreted cysteine knot-containing BMP antagonist belonging to the *Cerberus/DAN (CAN)* family. Mammalian *CAN* family members, including Gremlin, Dan, Cerberus, COCO, SOST, and USAG-1, have the conserved 6 cysteine residues that form a cysteine knot, and two additional cysteine residues located in the loops of the cysteine knot, which form an additional intrasubunit disulfide bond (1, 2). Some members of this family, including PRDC, have an additional cysteine residue used for dimerization (1, 2). Of all the *CAN* family members, PRDC is most closely related to Gremlin, displaying 52% amino acid sequence identity. PRDC was first identified in a screen for developmentally regulated genes by gene trapping in embryonic stem cells (3). PRDC expression is detected by *in situ hybridization* in the dorsal edge of the spinal cord at E10.5, in commissural neurons in the caudal part of the spinal cord two days later (3), and in the granulosa cells of selective ovarian follicles (4). In the adult, abundant levels of PRDC are detected by RT-PCR in the mouse ovary, brain, and spleen, and to a lesser degree in the colon, kidney, lung, liver, and uterus (4). PRDC acts as a specific BMP antagonist, binding to and blocking signaling induced by BMP-2 or -4, but not Activin or TGF-β (4). Thus, PRDC expression in the ovary could be involved in follicular development by antagonizing the inhibitory effects of BMPs on FSH stimulation of progesterone (4).

## 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.