Mouse PRDC/GREM2 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: BAF2069

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse PRDC/GREM2 in ELISAs and Western blots. In sandwich immunoassays, less than 0.1% cross-reactivity with recombinant mouse (rm) Cerberus, rmGremlin, rmDAN, recombinant human (rh) COCO, rhGremlin, and rmBMP-4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse PRDC/GREM2 Arg22-Gln168 Accession # O88273
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse PRDC/GREM2 (Catalog # 2069-PR)
Mouse PRDC Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Mouse PRDC/GREM2 Antibody (Catalog # AF2069)
ELISA Detection	0.1-0.4 µg/mL	Mouse PRDC/GREM2 Biotinylated Antibody (Catalog # BAF2069)
Standard		Recombinant Mouse PRDC/GREM2 (Catalog # 2069-PR)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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).

References:

1. Pearce, J. *et al.* (1999) Dev. Biol. **209**:99.
2. Avsian-Kretchmer, O. and A. Hsueh (2004) Molecular Endocrinology **18**:1.
3. Minabe-Saegusa, C. *et al.* (1998) Develop. Growth Differ. **40**:343.
4. Sudo, S. *et al.* (2004) Jour. Biol. Chem. **279**:23134.

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