

## DESCRIPTION

<b>Species Reactivity</b>	Mouse
<b>Specificity</b>	Detects mouse COCO in Western blots. In Western blots, less than 10% cross-reactivity with recombinant human COCO is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> - and mouse myeloma cell line NS0-derived recombinant mouse COCO Accession # NP_95679
<b>Formulation</b>	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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	0.1 µg/mL	Recombinant Mouse COCO (Catalog # 3356-CC)

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>• 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>• 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>• 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

COCO, also known as DAND5, Dante, and CKTSF1B3, is a member of the DAN domain family of BMP antagonists that includes DAN (DAND1), Gremlin/Drm (DAND2), PRDC (Protein Related to Dan and Cerberus; DAND3), and Cerberus (DAND4). DAN family members contain a cysteine knot domain that is homologous to that found in other TGF-β superfamily ligands such as BMPs that play important roles in tissue morphogenesis and developmental processes (1-6). The mouse COCO cDNA encodes a 185 amino acid (aa) precursor with a 23 aa signal sequence (7, 8). COCO has eight Cys residues in the cysteine knot which places it in the CAN (or eight-membered ring) subfamily of BMP antagonists along with the other DAN family proteins (1). Mature mouse COCO shares 62% and 27% aa sequence identity with human and *Xenopus* COCO, respectively. It shares 22%-27% aa sequence identity with mouse DAN, Gremlin, PRDC, and Cerberus. In *Xenopus* embryos, COCO is expressed by pluripotent ectodermal cells. Expression is abruptly downregulated prior to gastrulation, and the loss of ectodermal cell pluripotency is coincident with COCO downregulation (7). COCO is required for *Xenopus* left-right axis formation (9). It functions predominantly on the right side of the embryo, although it is equally expressed on both left and right sides (9). COCO binds and inhibits activin, BMP-4, GDF-3/derrière, Wnt8, and Xnr1 (7, 9). In mouse, COCO expression is elevated on the right side of Henson's node at the early somite stage, in contrast to the left side expression of Nodal (8).

## References:

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