

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human COCO in direct ELISAs and Western blots. In these formats, less than 1% cross-reactivity with recombinant mouse COCO is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human COCO (R&D Systems, Catalog # 3047-CC) Arg23-Ala189 Accession # NP_689867
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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

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 (1-3). BMPs play important roles in tissue morphogenesis and development processes (4-6). The human COCO cDNA encodes a 189 amino acid (aa) precursor with a 22 aa signal sequence (2, 7). COCO has eight Cys residues in the cysteine-knot which places it in the CAN subfamily of BMP antagonists along with the other DAN family proteins (1). Human COCO shares 60% and 24% aa sequence identity with mouse and *Xenopus* COCO, respectively. It shares 17%, 20%, 25%, and 22% aa sequence identity with human DAN, Gremlin, PRDC, and Cerberus, respectively. In *Xenopus* embryonal development, 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 binds and inhibits Xnr1, BMP-4, Activin, and Wnt-8 (7). 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). COCO may cooperate with Nodal in gastrulation and embryonic left-right axis formation (5, 8).

PRODUCT SPECIFIC NOTICES

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