

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Mouse                                                                                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | Detects mouse DAN in ELISAs and Western blots. In sandwich immunoassays, no cross-reactivity with recombinant human (rh) DAN, rhCOCO, recombinant mouse (rm) BMP-4, rmGremlin, or recombinant chicken (rch) Caronte is observed. In Western blots, no cross-reactivity with rhCOCO, rhBMP-4, rhGremlin, or rhCaronte is observed. |
| <b>Source</b>             | Monoclonal Rat IgG <sub>2A</sub> Clone # 123224                                                                                                                                                                                                                                                                                   |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                                                                        |
| <b>Immunogen</b>          | Mouse myeloma cell line NS0-derived recombinant mouse DAN Ala17-Asp178<br>Accession # Q61477                                                                                                                                                                                                                                      |
| <b>Conjugate</b>          | Alexa Fluor 700<br>Excitation Wavelength: 675-700 nm<br>Emission Wavelength: 723 nm                                                                                                                                                                                                                                               |
| <b>Formulation</b>        | 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.

|                                                |                                                                        |
|------------------------------------------------|------------------------------------------------------------------------|
| <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

DAN (differential screening-selected gene aberrative in neuroblastoma) was initially identified as a gene whose expression is down-regulated in *src*-transformed rat fibroblasts. DAN has now been shown to be a prototypical member of the DAN family of secreted glycoproteins that are putative BMP antagonists. DAN family members share a cysteine-rich domain that is structurally related to the cysteine-knot motif found in TGF-β superfamily ligands. There are at least five mouse DAN family members, including DAN, Gremlin/DRM, Cer1 (Cerberus-related), Dante and PRDC (protein related to DAN and cerberus). Additional DAN family members include *Xenopus* Cerberus, chick Caronte, and *C. elegans* CeCan 1. Murine DAN binds BMP-2 in immunoprecipitation experiments and acts as a BMP antagonist in *Xenopus* animal cap explants. The DAN family of proteins are thought to act as antagonists by binding BMP ligands and preventing their interactions with signaling receptor complexes. Recombinant mouse DAN preparations from R&D Systems have been shown to bind BMP-4 in a functional ELISA. It is likely the various DAN family members and other TGF-β BMP antagonists including Noggin, Chordin, Follistatin, and TSG can selectively antagonize the activities of different subsets of TGF-β superfamily ligands. These antagonists represent one of the many elaborate regulatory mechanisms that have evolved to control the bioactivities of the TGF-β superfamily ligands.

## PRODUCT SPECIFIC NOTICES

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