

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human DAN in ELISAs and Western blots. In ELISAs and Western blots, this antibody does not cross-react with recombinant mouse (rm) DAN, recombinant chicken Caronte, recombinant human Cerberus, or rmGremlin.
Source	Monoclonal Mouse IgG _{2B} Clone # 161502
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human DAN Ala17-Asp180 Accession # P41271
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.

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
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

DAN (differential screening-selected gene aberrative in neuroblastoma) was initially identified as a gene whose expression is downregulated in *src*-transformed rat fibroblasts. Human DAN was isolated from a normal lung cDNA library using mouse DAN as a probe. DAN has now been shown to be a prototypical member of the DAN family of secreted glycoproteins that are putative antagonists for TGF-β superfamily proteins. 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 mammalian DAN family members including DAN, Gremlin/DRM, Cer1 (Cerberus-related), Dante and PRDC (protein related to DAN and cereberus). Additional DAN family members include *Xenopus* Cerberus, chick Caronte and *C. elegans* CeCan 1. The DAN family of proteins are thought to act as antagonists by binding TGF-β family ligands and preventing their interactions with signaling receptor complexes. Recombinant human DAN preparations from R&D Systems have been shown to bind BMP-4 in a functional ELISA and to inhibit BMP-4 mediated bioactivity in ATDC 5 chondrogenic cells. 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.

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