Mouse Chordin-like 2/CHRDL2 Alexa Fluor® 405-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 328905

Catalog Number: FAB2520V

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Chordin-like 2/CHRDL2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human CHRDL2, recombinant mouse (rm) CHRDL1, or rmChordin is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 328905
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Chordin-like 2/CHRDL2 Gln24-Leu426 Accession # Q8VEA6.1
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.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	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

Chordin-like 2 (CHL2; also known as breast tumor novel factor 1/BNF-1), is a secreted glycoprotein that has significant homology to chordin and acts as a TGF-β superfamily antagonist (1-3). CHL2 is a chordin family member with structural homology to CHL1 (also known as neuralin or ventroptin) (1, 2). Mouse $CHL2_{401}$ cDNA encodes a 45-50 kDa, 426 amino acid (aa) residue precursor protein with a putative 25 aa signal peptide and a 401 aa mature segment. The mature segment contains three 63 aa cysteine-rich von Willebrand type C repeats (CRs) that are conserved among chordin family members in the spacing of 10 cysteine residues (1, 2). It also contains two potential N-linked glycosylation sites and one putative NLS that lies just proximal to the third CR repeat.

Mouse CHL2, like human CHL2, appears to undergo extensive alternate splicing. This splicing generates both secreted and intracellular forms of CHL2, and influences the type of TGF-β superfamily member bound (1, 2). The CRs of chordin, especially CR1 and CR3, have been shown to be the functional domains for BMP binding (4). The CR1 and CR3 of CHL proteins are most similar to CR3 of chordin (1). Mature mouse and human CHL2 share 71% amino acid identity, while mouse CHL1 and -2 share 40% amino acid identity (2). Like chordin, $CHL2_{401}$ exhibits BMP inhibitory activity by directly interacting with BMP-4 and preventing binding to its receptor (1). However, another CHL2 isoform with an additional exon 9b has been shown to bind and inhibit Activin A activity as well (2). $CHL2_{401}$ is not abundantly expressed in mouse embryos, but is detected only in the chondrocytes of developing joints and in the connective tissue of reproductive organs (1). Mouse CHL2 acts to reduce the rate of matrix accumulation in mesenchymal cells, acting as a negative regulator of cartilage formation (1). In the adult mouse, CHL2 is again detected only faintly in liver, kidney, skeletal muscle and testis (1). Expression patterns in human tissue blots are distinct from those expressed in mouse (1, 2).

PRODUCT SPECIFIC NOTICES

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Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475