

DESCRIPTION

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| Species Reactivity | Mouse |
| Specificity | Detects mouse Chordin-like 2/CHRD2 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human CHRD2, recombinant mouse (rm) CHRD1, 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/CHRD2 Gln24-Leu426 Accession # Q8VEA6.1 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

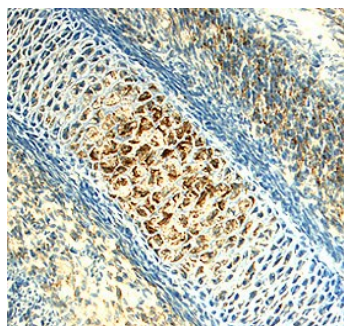
APPLICATIONS

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.

| | Recommended Concentration | Sample |
|-----------------------------|----------------------------------|--|
| Western Blot | 1 µg/mL | Recombinant Mouse Chordin-Like 2/CHRD2 (Catalog # 2520-CH) |
| Immunohistochemistry | 8-25 µg/mL | See Below |
| Immunoprecipitation | 25 µg/mL | Conditioned cell culture medium spiked with Recombinant Mouse Chordin-like 2/CHRD2 (Catalog # 2520-CH), see our available Western blot detection antibodies |

DATA

Immunohistochemistry



Chordin-like 2/CHRD2 in Embryonic Mouse Cartilage. Chordin-like 2/CHRD2 was detected in immersion fixed frozen sections of embryonic mouse cartilage (15 d.p.c.) using 25 µg/mL Rat Anti-Mouse Chordin-like 2/CHRD2 Monoclonal Antibody (Catalog # MAB2520) overnight at 4 °C. Tissue was stained with the Anti-Rat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # [CTS017](#)) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

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|--------------------------------|--|
| Reconstitution | Reconstitute at 0.5 mg/mL in sterile PBS. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

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 CHL2₄₀₁ 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, CHL2₄₀₁ 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). CHL2₄₀₁ 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).

References:

1. Nakayama, N. *et al.* (2004) *Development* **131**:229.
2. Oren, A. *et al.* (2004) *Gene* **331**:17.
3. Wu, I. and M.A. Moses (2003) *Gene* **311**:105.
4. Larrain, J. *et al.* (2000) *Development* **127**:821.