

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Chordin in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Chordin Thr27-Ser948 Accession # Q9Z0E2
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
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 as a 0.2 µm filtered solution in PBS.

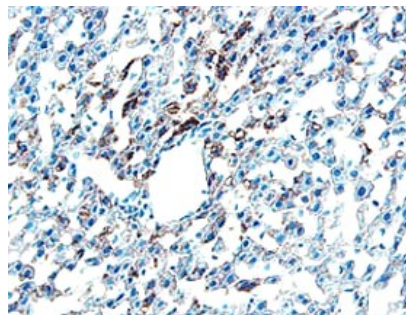
APPLICATIONS

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	0.1 µg/mL	Recombinant Mouse Chordin (Catalog # 758-CN)
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 3-12 µg/mL of this antibody will block 50% of the binding of 100 ng/mL of Recombinant Human BMP-4 (Catalog # 314-BP) to immobilized Recombinant Mouse Chordin (Catalog # 758-CN) coated at 5 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



Chordin in Mouse Liver.
Chordin was detected in perfusion fixed frozen sections of mouse liver using 15 µg/mL Goat Anti-Mouse Chordin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF758) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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 is a secreted glycoprotein that regulates dorsoventral patterning during gastrulation. Chordin functions as a bone morphogenetic protein (BMP) antagonist that blocks their ventralizing activity by binding to the BMPs and inhibiting their interaction with their receptors. Mouse Chordin cDNA encodes a 948 amino acid (aa) residue precursor protein with a putative 26 aa residue signal peptide. Chordin contains four internal cysteine-rich repeats (CRs) that are conserved in the spacing of their ten cysteine residues. The CRs of chordin, especially CR1 and CR3, have been shown to be the functional domains for BMP binding. These conserved CRs are present in an expanding family of secreted molecules that antagonize BMP signaling. Xolloid (an extracellular zinc metalloproteinase) can cleave chordin at two specific sites resulting in chordin fragments with lower BMP-affinity. Cleavage of the chordin/BMP complex can reverse the BMP antagonist activity of chordin. Mouse chordin is expressed at high levels in 7 day postcoitum mouse embryos. Chordin expression is also detected in multiple fetal and adult tissues, most notably liver and cerebellum, suggesting additional roles for chordin in organogenesis and homeostasis.

References:

1. De Robertis, E.M. and Y. Sasai (1996) *Nature* **380**:37.
2. Larrain, J. *et al.* (2000) *Development* **127**:821.
3. Coffinier, C. *et al.* (2001) *Mech. Dev.* **100**:119.