

# chordin (N-20): sc-18265

## BACKGROUND

The patterning of the CNS relies on the interaction of multiple signaling molecules such as Sonic Hedgehog, Wnts and BMPs and their antagonists chordin and Noggin. At midgastrula, expression of Noggin overlaps that of chordin. Chordin is a key developmental protein that dorsalizes early vertebrate embryonic tissues by binding to ventralizing TGF $\beta$ -like bone morphogenetic proteins and sequestering them in latent complexes. Chordin dorsalizes early vertebrate embryonic tissues by binding to bone morphogenetic proteins and sequestering them in latent complexes. The gene which encodes chordin maps to human chromosome 3q27. Noggin is a secreted protein that binds and inactivates members of the TGF $\beta$  superfamily of signaling proteins, such as BMP-2,4,7. The gene which encodes Noggin maps to human chromosome 17q22.

## REFERENCES

1. Valenzuela, D.M., et al. 1995. Identification of mammalian Noggin and its expression in the adult nervous system. *J. Neurosci.* 15: 6077-6084.
2. Zimmerman, L.B., et al. 1996. The Spemann organizer signal Noggin binds and inactivates bone morphogenetic protein 4. *Cell* 86: 599-606.
3. Pappano, W.N., et al. 1998. Coding sequence and expression patterns of mouse chordin and mapping of the cognate mouse chrd and human CHR genes. *Genomics* 52: 236-239.
4. Scott, I.C., et al. 1999. Mammalian BMP-1/Tolloid-related metalloproteinases, including novel family member mammalian Tolloid-like 2, have differential enzymatic activities and distributions of expression relevant to patterning and skeletogenesis. *Dev. Biol.* 213: 283-300.
5. Bachiller, D., et al. 2000. The organizer factors chordin and Noggin are required for mouse forebrain development. *Nature* 403: 658-661.
6. Wessely, O., et al. 2002. Neural plate patterning by secreted signals. *Neuron* 33: 489-491.

## CHROMOSOMAL LOCATION

Genetic locus: CHR (human) mapping to 3q27.1; Chrd (mouse) mapping to 16 B1.

## SOURCE

chordin (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of chordin of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18265 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

chordin (N-20) is recommended for detection of chordin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

chordin (N-20) is also recommended for detection of chordin in additional species, including bovine.

Suitable for use as control antibody for chordin siRNA (h): sc-42136, chordin siRNA (m): sc-42137, chordin shRNA Plasmid (h): sc-42136-SH, chordin shRNA Plasmid (m): sc-42137-SH, chordin shRNA (h) Lentiviral Particles: sc-42136-V and chordin shRNA (m) Lentiviral Particles: sc-42137-V.

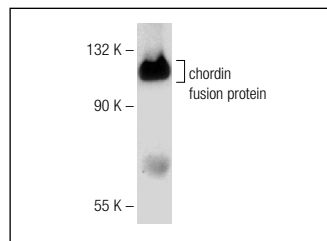
Molecular Weight of chordin: 120 kDa.

Positive Controls: rat liver extract: sc-2395 or Hep G2 cell lysate: sc-2227.

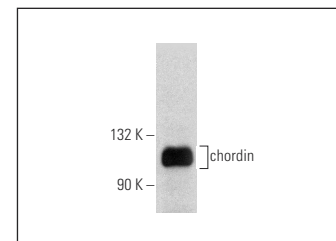
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



chordin (N-20): sc-18265. Western blot analysis of mouse recombinant chordin fusion protein.



chordin (N-20): sc-18265. Western blot analysis of chordin expression in rat liver tissue extract.

## SELECT PRODUCT CITATIONS

1. Kwong, F.N., et al. 2008. Altered relative expression of BMPs and BMP inhibitors in cartilaginous areas of human fractures progressing towards nonunion. *J. Orthop. Res.* 27: 752-757.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.