

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Chordin-like 1/CHRD1 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Chordin-like 1/CHRD1 Glu28-Cys457 Accession # NP_001137454
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

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 1 (CHRD1) also known as Chordin-like, ventroptin, and neuralin, is a secreted glycoprotein that has significant homology to chordin and acts as a bone morphogenetic protein (BMP) antagonist (1-3). Human Chordin-Like 1 cDNA encodes a 450 amino acid (aa) residue precursor protein with a putative 21 aa residue signal peptide. Chordin-Like 1 contains three internal cysteine-rich procollagen repeats (CRs) that are conserved in the spacing of their ten cysteines. The CRs of chordin, especially CR1 and CR3, have been shown to be the functional domains for BMP binding (1). The CR1 and CR3 of Chordin-Like 1 are most similar to CR3 of chordin (1). Chordin-Like 1 and chordin exhibit similar BMP inhibitory activity *in vivo* and directly interact with BMP-4 *in vitro* (1, 2). However, Chordin-Like 1 differs in its spatial and temporal expression from chordin. Mouse Chordin-Like 1 is detected in mesenchyme-derived cells such as the dermatome and limb bud, as well as chondrocytes of the developing skeleton later in development. In addition, Chordin-Like 1 is expressed embryonically in the gastrointestinal tract, kidney tubules, neural tube, CNS, cerebellum, derivatives of the neural crest cells, developing hair follicles, and the olfactory bulb where it is expressed in a gradient in the retina (1-3). Chordin-Like 1 is also expressed in adult marrow stromal cells. Human CHRD1 and the long form of mouse CHRD1 share 93% aa sequence identity.

Multiple forms of human Chordin-Like 1 containing small deletions or insertions (including an E insertion between P94 and D95, a GKKAK deletion (aa residues 318-322), and/or another E insertion between K322 and E323) have been described. Similar isoforms have also been reported for mouse Chordin-Like 1. In addition, a short form of mouse Chordin-Like 1 with a shortened variant C-terminus but with all 3 CR domains intact also exists (1). These multiple forms were attributed to alternative splicing and transcriptional termination sites within the coding region of Chordin-Like 1.

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