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Goat Anti-CILP Antibody
Peptide-affinity purified goat antibody
Catalog # AF1244a

Specification

Goat Anti-CILP Antibody - Product Information

Application	**WB**
Primary Accession	O75339
Other Accession	NP_003604, 8483, 214425 (mouse), 315761 (rat)
Reactivity	**Rat**
Predicted	**Human, Mouse, Dog**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**132565**

Goat Anti-CILP Antibody - Additional Information

Gene ID 8483

Other Names
Cartilage intermediate layer protein 1, CILP-1, Cartilage intermediate-layer protein, Cartilage intermediate layer protein 1 C1, Cartilage intermediate layer protein 1 C2, CILP

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-CILP Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-CILP Antibody - Protein Information

Name CILP

Function
Probably plays a role in cartilage scaffolding. May act by antagonizing TGF-beta1 (TGFB1) and IGF1 functions. Has the ability to suppress IGF1-induced proliferation and sulfated proteoglycan synthesis, and inhibits ligand-induced IGF1R autophosphorylation. May inhibit TGFB1-mediated induction of cartilage matrix genes via its interaction with TGFB1. Overexpression may lead to

impair chondrocyte growth and matrix repair and indirectly promote inorganic pyrophosphate (PPi) supersaturation in aging and osteoarthritis cartilage.

Cellular Location
Secreted, extracellular space, extracellular matrix

Tissue Location
Specifically expressed in cartilage. Localizes in the intermediates layer of articular cartilage but neither in the superficial nor in the deepest regions. Specifically and highly expressed in intervertebral disk tissue. Expression increases with aging in hip articular cartilage. Overexpressed in articular hyaline cartilage from patients with calcium pyrophosphate dihydrate crystal deposition disease (CPPD). Expression in intervertebral disk tissue from individuals with lumbar disk disease increases as disk degeneration progresses.

Goat Anti-CILP Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Goat Anti-CILP Antibody - Images

AF1244a (0.03 µg/ml) staining of rat spinal cord lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-CILP Antibody - Background

Major alterations in the composition of the cartilage extracellular matrix occur in joint disease, such as osteoarthrosis. This gene encodes the cartilage intermediate layer protein (CILP), which increases in early osteoarthrosis cartilage. The encoded protein was thought to encode a protein precursor for two different proteins; an N-terminal CILP and a C-terminal homolog of NTPPHase, however, later studies identified no nucleotide pyrophosphatase phosphodiesterase (NPP) activity. The full-length and the N-terminal domain of this protein was shown to function as an IGF-1 antagonist. An allelic variant of this gene has been associated with lumbar disc disease.

Goat Anti-CILP Antibody - References

Cartilage Intermediate Layer Protein Gene Is Associated With Lumbar Disc Degeneration in Male, but Not Female, Collegiate Athletes. Min SK, et al. Am J Sports Med, 2010 Aug 19. PMID 20724643.
The cartilage intermediate layer protein gene is associated with lumbar disc degeneration in collegiate judokas. Min SK, et al. Int J Sports Med, 2009 Sep. PMID 19569011.
Phenotypic and population differences in the association between CILP and lumbar disc disease. Virtanen IM, et al. J Med Genet, 2007 Apr. PMID 17220213.
Reproducible genetic associations between candidate genes and clinical knee osteoarthritis in men and women. Valdes AM, et al. Arthritis Rheum, 2006 Feb. PMID 16453284.
Transcriptional regulation of the cartilage intermediate layer protein (CILP) gene. Mori M, et al. Biochem Biophys Res Commun, 2006 Mar 3. PMID 16413503.