

CILP (N-17): sc-47841

BACKGROUND

Cartilage intermediate layer protein (CILP), an extracellular matrix protein, shows abundant expression in cartilaginous tissues. CILP is expressed as two isoforms, CILP and CILP-2, which are differentially expressed by chondrocytes and induced by TGF β 1. This induction is mediated by Smad3 through direct interactions with *cis*-elements in the CILP promoter region. TGF β also induces elevated chondrocyte extracellular inorganic pyrophosphate (PPi), which promotes the deposition of calcium pyrophosphate dihydrate crystals. The CILP isoforms have been implicated in common musculoskeletal disorders, including osteoarthritis, rheumatoid arthritis and lumbar disc disease.

REFERENCES

1. Johnson, K., Farley, D., Hu, S.I. and Terkeltaub, R. 2003. One of two chondrocyte-expressed isoforms of cartilage intermediate-layer protein functions as an Insulin-like growth factor 1 antagonist. *Arthritis Rheum.* 48: 1302-1314.
2. Valdes, A.M., Hart, D.J., Jones, K.A., Surdulescu, G., Swarbrick, P., Doyle, D.V., Schafer, A.J. and Spector, T.D. 2004. Association study of candidate genes for the prevalence and progression of knee osteoarthritis. *Arthritis Rheum.* 50: 2497-2507.
3. Yao, Z., Nakamura, H., Masuko-Hongo, K., Suzuki-Kurokawa, M., Nishioka, K. and Kato, T. 2004. Characterisation of cartilage intermediate layer protein (CILP)-induced arthropathy in mice. *Ann. Rheum. Dis.* 63: 252-258.
4. Lorenzo, P., Bayliss, M.T. and Heinegard, D. 2004. Altered patterns and synthesis of extracellular matrix macromolecules in early osteoarthritis. *Matrix Biol.* 23: 381-391.
5. Du, H., Masuko-Hongo, K., Nakamura, H., Xiang, Y., Bao, C.D., Wang, X.D., Chen, S.L., Nishioka, K. and Kato, T. 2005. The prevalence of autoantibodies against cartilage intermediate layer protein, YKL-39, osteopontin, and cyclic citrullinated peptide in patients with early-stage knee osteoarthritis: evidence of a variety of autoimmune processes. *Rheumatol. Int.* 26: 35-41.
6. Seki, S., Kawaguchi, Y., Chiba, K., Mikami, Y., Kizawa, H., Oya, T., Mio, F., Mori, M., Miyamoto, Y., Masuda, I., Tsunoda, T., Kamata, M., Kubo, T., Toyama, Y., Kimura, T., Nakamura, Y. and Ikegawa, S. 2005. A functional SNP in CILP, encoding cartilage intermediate layer protein, is associated with susceptibility to lumbar disc disease. *Nat. Genet.* 37: 607-612.
7. Mori, M., Nakajima, M., Mikami, Y., Seki, S., Takigawa, M., Kubo, T. and Ikegawa, S. 2006. Transcriptional regulation of the cartilage intermediate layer protein (CILP) gene. *Biochem. Biophys. Res. Commun.* 341: 121-127.

CHROMOSOMAL LOCATION

Genetic locus: CILP (human) mapping to 15q22.31; Cilp (mouse) mapping to 9 C.

SOURCE

CILP (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CILP of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47839 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CILP (N-17) is recommended for detection of CILP of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CILP (N-17) is also recommended for detection of CILP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for CILP siRNA (h): sc-60384, CILP siRNA (m): sc-60385, CILP shRNA Plasmid (h): sc-60384-SH, CILP shRNA Plasmid (m): sc-60385-SH, CILP shRNA (h) Lentiviral Particles: sc-60384-V and CILP shRNA (m) Lentiviral Particles: sc-60385-V.

Molecular Weight of CILP: 132.5 kDa.

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) 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.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.