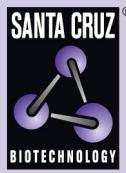


CILP-2 (M-135): sc-98877



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

- 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.
- Yao, Z., Nakamura, H., Masuko-Hongo, K., Suzuki-Kurokawa, M., Nishioka, K. and Kato, T. 2004. Characterization of cartilage intermediate layer protein (CILP)-induced arthropathy in mice. *Ann. Rheum. Dis.* 63: 252-258.
- 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.
- 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.
- 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.
- 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.
- 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: CILP2 (human) mapping to 19p13.11; Cilp2 (mouse) mapping to 8 B3.3.

SOURCE

CILP-2 (M-135) is a rabbit polyclonal antibody raised against amino acids 200-334 mapping within an internal region of CILP-2 of mouse origin.

PRODUCT

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

APPLICATIONS

CILP-2 (M-135) is recommended for detection of CILP-2 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ 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).

Suitable for use as control antibody for CILP-2 siRNA (h): sc-60386, CILP-2 siRNA (m): sc-142343, CILP-2 shRNA Plasmid (h): sc-60386-SH, CILP-2 shRNA Plasmid (m): sc-142343-SH, CILP-2 shRNA (h) Lentiviral Particles: sc-60386-V and CILP-2 shRNA (m) Lentiviral Particles: sc-142343-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.



Try **CILP-2 (B-1): sc-390297**, our highly recommended monoclonal alternative to CILP-2 (M-135).