SANTA CRUZ BIOTECHNOLOGY, INC.

CILP-2 (B-1): sc-390297

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cartilage intermediate layer protein (CILP), an extracellular matrix protein, shows abundant expression in cartilagenous tissues. CILP is expressed as two isoforms, CILP and CILP-2, which are differentially expressed by chondrocytes and induced by TGFβ1. This induction is mediated by Smad3 through direct interactions with *cis*-elements in the CILP promoter region. TGFβ 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., et al. 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. Yao, Z., et al. 2004. Characterization of cartilage intermediate layer protein (CILP)-induced arthropathy in mice. Ann. Rheum. Dis. 63: 252-258.
3. Valdes, A.M., et al. 2004. Association study of candidate genes for the prevalence and progression of knee osteoarthritis. Arthritis Rheum. 50: 2497-2507.
4. Lorenzo, P., et al. 2004. Altered patterns and synthesis of extracellular matrix macromolecules in early osteoarthritis. Matrix Biol. 23: 381-391.
5. Du, H., et al. 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., et al. 2005. A functional SNP in CILP, encoding cartilage intermediate layer protein, is associated with susceptibility to lumbar disc disease. Nat. Genet. 37: 607-612.

CHROMOSOMAL LOCATION

Genetic locus: CILP2 (human) mapping to 19p13.11; Cilp2 (mouse) mapping to 8 B3.3.

SOURCE

CILP-2 (B-1) is a mouse monoclonal antibody raised against amino acids 541-638 mapping within an internal region of CILP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CILP-2 (B-1) is available conjugated to agarose (sc-390297 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390297 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390297 PE), fluorescein (sc-390297 FITC), Alexa Fluor® 488 (sc-390297 AF488), Alexa Fluor® 546 (sc-390297 AF546), Alexa Fluor® 594 (sc-390297 AF594) or Alexa Fluor® 647 (sc-390297 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390297 AF680) or Alexa Fluor® 790 (sc-390297 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CILP-2 (B-1) is recommended for detection of CILP-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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.

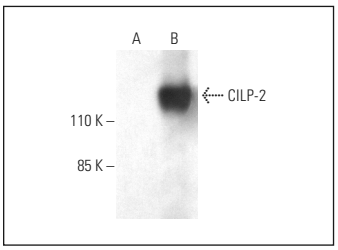
Molecular Weight of CILP-2: 126 kDa.

Positive Controls: human CILP-2 transfected 293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



CILP-2 (B-1): sc-390297. Western blot analysis of CILP-2 expression in untransfected 293T (**A**) and human CILP-2 transfected 293T (**B**) whole cell lysates.

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 for detailed protocols and support products.

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