

GP-39 (H-46): sc-98955

BACKGROUND

Human cartilage glycoprotein 39 (GP-39), also known as YKL-40, is a glycoprotein secreted by articular chondrocytes, synoviocytes and macrophages. Serum and synovial fluid GP-39 levels are elevated in inflammatory diseases and correlate with the degree of joint destruction in rheumatoid arthritis. GP-39 is expressed in articular chondrocytes and synovial cells, as well as in liver, but is undetectable in muscle tissues, lung, pancreas, mononuclear cells and fibroblasts. GP-39 is a candidate autoantigen in rheumatoid arthritis and is important in the capacity of cells to respond to and cope with changes in their environment.

REFERENCES

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- Liu, H.W., et al. 2000. GP-83 and GP-39, two glycoproteins secreted by human epididymis are conjugated to spermatozoa during maturation. *Mol. Hum. Reprod.* 6: 422-428.
- De Ceuninck, F., et al. 2001. YKL-40 (cartilage GP-39) induces proliferative events in cultured chondrocytes and synoviocytes and increases glycosaminoglycan synthesis in chondrocytes. *Biochem. Biophys. Res. Commun.* 285: 926-931.
- Recklies, A.D., et al. 2002. The chitinase 3-like protein human cartilage glycoprotein 39 (HC GP-39) stimulates proliferation of human connective-tissue cells and activates both extracellular signal-regulated kinase- and protein kinase B-mediated signalling pathways. *Biochem. J.* 365: 119-126.
- Tsuji, T., et al. 2002. Analysis of chondrex (YKL-40, HC GP-39) in the cerebrospinal fluid of patients with spine disease. *Spine* 27: 732-735.
- Steenbakkens, P.G., et al. 2003. Localization of MHC class II/human cartilage glycoprotein 39 complexes in synovia of rheumatoid arthritis patients using complex-specific monoclonal antibodies. *J. Immunol.* 170: 5719-5727.
- Shostak, K., et al. 2003. HC GP-39 gene is upregulated in glioblastomas. *Cancer Lett.* 198: 203-210.

CHROMOSOMAL LOCATION

Genetic locus: CHI3L1 (human) mapping to 1q32.1.

SOURCE

GP-39 (H-46) is a rabbit polyclonal antibody raised against amino acids 209-247 mapping within an internal region of GP-39 of human origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

GP-39 (H-46) is recommended for detection of GP-39 of human origin by Western Blotting (starting dilution 1:200, 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).

GP-39 (H-46) is also recommended for detection of GP-39 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for GP-39 siRNA (h): sc-44580, GP-39 shRNA Plasmid (h): sc-44580-SH and GP-39 shRNA (h) Lentiviral Particles: sc-44580-V.

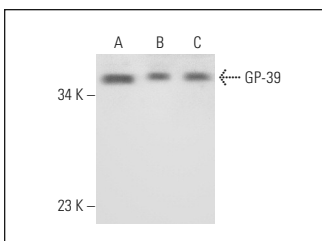
Molecular Weight of GP-39: 39 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, THP-1 cell lysate: sc-2238 or HeLa whole cell lysate: sc-2200.

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.

DATA



GP-39 (H-46): sc-98955. Western blot analysis of GP-39 expression in Hep G2 (A), THP-1 (B) and HeLa (C) whole cell lysates.

RESEARCH USE

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



Try **GP-39 (D-11): sc-393494** or **GP-39 (E-10): sc-393476**, our highly recommended monoclonal alternatives to GP-39 (H-46).