

GP-39 (E-10): sc-393476

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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2. 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.
3. 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.
4. 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.
5. 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.
6. Steenbakkers, 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.
7. Shostak, K., et al. 2003. HC GP-39 gene is upregulated in glioblastomas. *Cancer Lett.* 198: 203-210.
8. Baeten, D., et al. 2004. Detection of major histocompatibility complex/human cartilage GP-39 complexes in rheumatoid arthritis synovitis as a specific and independent histologic marker. *Arthritis Rheum.* 50: 444-451.

CHROMOSOMAL LOCATION

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

SOURCE

GP-39 (E-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 101-128 near the N-terminus of GP-39 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393476 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GP-39 (E-10) is recommended for detection of GP-39 of 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 GP-39 siRNA (h): sc-44580, GP-39 shRNA Plasmid (h): sc-44580-SH and GP-39 shRNA (h) Lentiviral Particles: sc-44580-V.

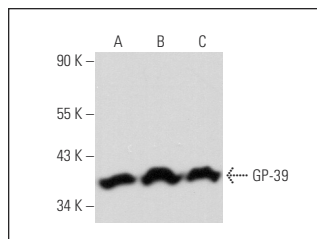
Molecular Weight of GP-39: 39 kDa.

Positive Controls: GP-39 (h): 293 Lysate: sc-110933, HeLa whole cell lysate: sc-2200 or human liver extract: sc-363766.

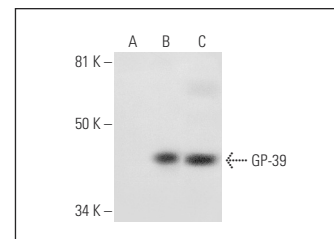
RECOMMENDED SUPPORT REAGENTS

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



GP-39 (E-10): sc-393476. Western blot analysis of GP-39 expression in Hep G2 (A), HeLa (B) and COLO 205 (C) whole cell lysates.



GP-39 (E-10): sc-393476. Western blot analysis of GP-39 expression in non-transfected: sc-110760 (A) and human GP-39 transfected: sc-110933 (B) 293 whole cell lysates and human liver tissue extract (C).

RESEARCH USE

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