SANTA CRUZ BIOTECHNOLOGY, INC.

GP-39 (A-10): sc-393590

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Hakala, B.E., et al. 1993. Human cartilage GP-39, a major secretory product of articular chondrocytes and synovial cells, is a mammalian member of a chitinase protein family. J. Biol. Chem. 268: 25803-25810.
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. 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.
5. 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.
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.

CHROMOSOMAL LOCATION

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

SOURCE

GP-39 (A-10) is a mouse monoclonal 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_1 kappa light chain 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 (A-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.

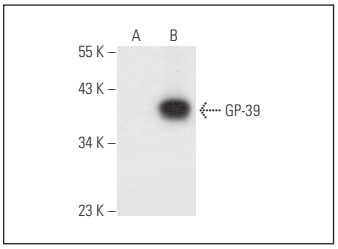
Molecular Weight of GP-39: 39 kDa.

Positive Controls: GP-39 (h2): 293T Lysate: sc-113587 or MCF7 whole cell lysate: sc-2206.

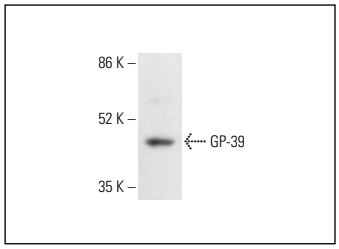
RECOMMENDED SUPPORT REAGENTS

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 (A-10): sc-393590. Western blot analysis of GP-39 expression in non-transfected: sc-117752 (**A**) and human GP-39 transfected: sc-113587 (**B**) 293T whole cell lysates.



GP-39 (A-10): sc-393590. Western blot analysis of GP-39 expression in MCF7 whole cell lysate. Detection reagent used: m-IgG Fc BP-HRP: sc-525409.

SELECT PRODUCT CITATIONS

1. Sharma, A., et al. 2017. Angiogenic gene signature derived from subtype specific cell models segregate proneural and mesenchymal glioblastoma. Front. Oncol. 7: 146.
2. Wieczfinska, J. and Pawliczak, R. 2022. Relaxin affects airway remodeling genes expression through various signal pathways connected with transcription factors. Int. J. Mol. Sci. 23: 8413.

RESEARCH USE

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