

# GP-39 (E-15): sc-30859

## 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, synovial cells and 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.* 365:119-26.
5. Shostak, K., et al. 2003. HC GP-39 gene is upregulated in glioblastomas. *Cancer Lett.* 198: 203-210.
6. 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.* 170:5719-27
7. 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.
8. SWISS-PROT/TrEMBL (P36222). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

## CHROMOSOMAL LOCATION

Genetic locus: Chi311 (mouse) mapping to 1 E4.

## SOURCE

GP-39 (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of GP-39 of mouse 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 IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30859 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GP-39 (E-15) is recommended for detection of GP-39 of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (m): sc-44581, GP-39 shRNA Plasmid (m): sc-44581-SH and GP-39 shRNA (m) Lentiviral Particles: sc-44581-V.

Molecular Weight of GP-39: 39 kDa.

Positive Controls: mouse liver extract: sc-2256.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

This product is licensed for research use only under U.S. Patent No. 7,230,086. Other uses of this SCBT product, for example in diagnostics and therapeutics, are outside the scope of the license and are not authorized.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **GP-39 (E-11): sc-376910** or **GP-39 (D-6): sc-376941**, our highly recommended monoclonal alternatives to GP-39 (E-15).