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
2. Liu, H.W., et al. 2000. GP-83 and GP-39, two glycoproteins secreted by articularchondrocytes, 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. For research use only, not for use in diagnostic procedures.

APPLICATIONS
GP-39 (D-11) is recommended for detection of GP-39 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), immunohistochemistry (including paraffin-embedded sections) (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 (D-11) is also recommended for detection of GP-39 in additional species, including bovine and porcine.

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistochemical Staining kit: sc-24941 or Western Blotting Luminol Reagent: sc-516214 and Western Blotting Mounting Medium: sc-24948. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ FITC: sc-516140 or m-IgG κ PE: sc-516141 (dilution range 1:50-1:200) with UltraCruz® Mounting Medium: sc-45086, or Organo/Limonene Mount: sc-45087.

Recommended Support Reagents

DATA

GP-39 (D-11): sc-393494, Western blot analysis of GP-39 expression in non-transfected 293. GP-39 transfected 293: sc-110933 (A), Jurkat (C) and THP-1 (D) whole cell lysates.

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