SANTA CRUZ BIOTECHNOLOGY, INC.

TSG-6 (A6.6.11): sc-65887

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The TSG6 gene is transcribed in normal fibroblasts and activated by binding of the cytokines TNFα and IL-1 at AP-1 and NF-IL6 sites in its promoter. TSG-6 is a glycoprotein and a member of the hyaluronan-binding protein family, which includes cartilage link protein, proteoglycan core protein and the adhesion receptor CD44. TSG-6 is highly homologous to CD44, particularly in the hyaluronic acid-binding domain. TSG-6 is found in TNF-treated cells; its expression is rapidly activated by TNFα, IL-1 and lipopolysaccharide in normal fibroblasts, peripheral blood mononuclear cells, synovial cells and chondrocytes. The presence of TSG-6 in synovial fluid suggests a possible role in rheumatoid arthritis. TSG-6 forms a stable complex with components of the serine protease inhibitor, inter-α-inhibitor (Iαl)). TSG-6 potentiates the inhibitory effect of Iαl on the protease activity of plasmin. Through their cooperative inhibitory effect on plasmin, TSG-6 and Iαl can modulate the protease network and thus inhibit inflammation.

REFERENCES

1. Lee, T.H., Wisniewski, H.G. and Vilcek, J. 1992. A novel secretory tumor necrosis factor-inducible protein TSG-6 is a member of the family of hyaluronate binding proteins, closely related to the adhesion receptor CD44. J. Cell Biol. 116: 545-557.
2. Wisniewski, H.G., Maier, R., Lotz, M., Lee, S., Klampfer, L., Lee, T.H. and Vilcek, J. 1993. TSG-6: a TNF-, IL-1-, and LPS-inducible secreted glycoprotein associated with arthritis. J. Immunol. 151: 6593-6601.
3. Lee, T.H., Klampfer, L., Shows, T.B. and Vilcek, J. 1993. Transcriptional regulation of TSG-6, a tumor necrosis factor- and interleukin-1-inducible primary response gene coding for a secreted hyaluronan-binding protein. J. Biol. Chem. 268: 6154-6160.
4. Wisniewski, H.G., Burgess, W.H., Oppenheim, J.D. and Vilcek, J. 1994. TSG-6, an arthritis-associated hyaluronan binding protein, forms a stable complex with the serum protein inter-α-inhibitor. Biochemistry 33: 7423-7429.
5. Klampfer, L., Lee, T.H., Hsu, W., Vilcek, J. and Chen-Kiang, S. 1994. NF-IL6 and AP-1 cooperatively modulate the activation of the TSG-6 gene by tumor necrosis factor α and interleukin-1. Mol. Cell. Biol. 14: 6561-6569.

CHROMOSOMAL LOCATION

Genetic locus: TNFAIP6 (human) mapping to 2q23.3; Tnfaip6 (mouse) mapping to 2 C1.1.

SOURCE

TSG-6 (A6.6.11) is a rat monoclonal antibody raised against a CTLL-2 cell line expressing CD44 TSG chimera of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

TSG-6 (A6.6.11) is recommended for detection of TSG-6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for TSG-6 siRNA (h): sc-39819, TSG-6 siRNA (m): sc-39820, TSG-6 siRNA (r): sc-270514, TSG-6 shRNA Plasmid (h): sc-39819-SH, TSG-6 shRNA Plasmid (m): sc-39820-SH, TSG-6 shRNA Plasmid (r): sc-270514-SH, TSG-6 shRNA (h) Lentiviral Particles: sc-39819-V, TSG-6 shRNA (m) Lentiviral Particles: sc-39820-V and TSG-6 shRNA (r) Lentiviral Particles: sc-270514-V.

Molecular Weight of TSG-6: 35 kDa.

SELECT PRODUCT CITATIONS

1. Smith, G.A., et al. 2016. Extracellular and luminal pH regulation by vacuolar H^+-ATPase Isoform expression and targeting to the plasma membrane and endosomes. J. Biol. Chem. 291: 8500-8515.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **TSG-6 (E-1): sc-377277** for TSG-6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.