

TSG-6 (A38.1.20): sc-65886

BACKGROUND

The TSG6 gene is transcribed in normal fibroblasts and activated by binding of the cytokines TNF α 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 TNF α , 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 (α I). TSG-6 potentiates the inhibitory effect of α I on the protease activity of plasmin. Through their cooperative inhibitory effect on plasmin, TSG-6 and α I can modulate the protease network and thus inhibit inflammation.

CHROMOSOMAL LOCATION

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

SOURCE

TSG-6 (A38.1.20) is a rat monoclonal antibody raised against a CTLL-2 cell line expressing CD44:TSG chimera of human origin.

PRODUCT

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

TSG-6 (A38.1.20) is available conjugated to agarose (sc-65886 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65886 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-65886 PE), fluorescein (sc-65886 FITC), Alexa Fluor[®] 488 (sc-65886 AF488), Alexa Fluor[®] 546 (sc-65886 AF546), Alexa Fluor[®] 594 (sc-65886 AF594) or Alexa Fluor[®] 647 (sc-65886 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-65886 AF680) or Alexa Fluor[®] 790 (sc-65886 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

TSG-6 (A38.1.20) 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), immunoprecipitation [1-2 μ g per 100-500 μ g 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 intracellular flow cytometry (1 μ g per 1 x 10⁶ cells).

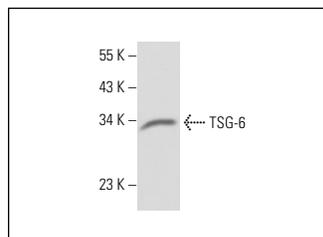
Suitable for use as control antibody for TSG-6 siRNA (h): sc-39819, TSG-6 siRNA (m): sc-39820, TSG-6 siRNA (r): sc-270514, TSG-6 shRNA Plasmid (h): sc-39819-SH, TSG-6 shRNA Plasmid (m): sc-39820-SH, TSG-6 shRNA Plasmid (r): sc-270514-SH, TSG-6 shRNA (h) Lentiviral Particles: sc-39819-V, TSG-6 shRNA (m)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

Molecular Weight of TSG-6: 35 kDa.

STORAGE

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

DATA



TSG-6 (A38.1.20): sc-65886. Western blot analysis of human recombinant TSG-6.

SELECT PRODUCT CITATIONS

- Lee, R.H., et al. 2009. Intravenous hMSCs improve myocardial infarction in mice because cells embolized in lung are activated to secrete the anti-inflammatory protein TSG-6. *Cell Stem Cell* 5: 54-63.
- Hengartner, N.E., et al. 2015. Crucial role of IL1 β and C3a in the *in vitro*-response of multipotent mesenchymal stromal cells to inflammatory mediators of polytrauma. *PLoS ONE* 10: e0116772.
- Martin, J., et al. 2016. Tumor necrosis factor-stimulated gene 6 (TSG-6)-mediated interactions with the inter- α -inhibitor heavy chain 5 facilitate tumor growth factor β 1 (TGF β 1)-dependent fibroblast to myofibroblast differentiation. *J. Biol. Chem.* 291: 13789-13801.
- Wang, G., et al. 2018. Kynurenic acid, an IDO metabolite, controls TSG-6-mediated immunosuppression of human mesenchymal stem cells. *Cell Death Differ.* 25: 1209-1223.
- Bartosh, T.J. and Ylostalo, J.H. 2019. Efficacy of 3D culture priming is maintained in human mesenchymal stem cells after extensive expansion of the cells. *Cells* 8: 1031.
- Gül, M., et al. 2020. An evaluation of the effects of caffeic acid phenethyl ester and Ankaferd blood stopper on secondary wound healing of oral mucosal tissue. *Turk. J. Med. Sci.* 50: 248-257.
- Evrard, C., et al. 2021. Deletion of TNFAIP6 gene in human keratinocytes demonstrates a role for TSG-6 to retain hyaluronan inside epidermis. *JID Innov.* 1: 100054.
- Yamamoto, K., et al. 2022. A top-down approach to uncover the hidden ligandome of low-density lipoprotein receptor-related protein 1 in cartilage. *Matrix Biol.* 112: 190-218.

RESEARCH USE

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

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