

ST2 (C-20): sc-18687

BACKGROUND

The orphan receptor ST2/T1 is a member of the IL-1R family, although it does not bind IL-1 α , IL-1 β or IL-1R antagonist, and it is preferentially expressed on the surface of T helper cell type 2 (Th2) cells, but not Th1 cells. The gene encoding human ST2 maps to chromosome 2q12.1 and its transcription is controlled by two distinct promoters, an upstream promoter, which directs transcription in hematopoietic cells, and a downstream promoter, which directs transcription in fibroblasts. ST2 is also alternatively spliced to produce three variants; the secreted soluble form (ST2), which is expressed in fibroblasts, the membrane-bound form (ST2L), which is expressed in hematopoietic cells, and ST2V, which is localized on the plasma membrane and is expressed in the stomach, small intestine and colon. ST2 has immunoregulatory properties and therefore, may have therapeutic potential as an anti-inflammatory agent.

REFERENCES

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- Gachter, T., et al. 1996. Transcription of the interleukin-1 receptor-related T1 gene is initiated at different promoters in mast cells and fibroblasts. *J. Biol. Chem.* 271: 124-129.
- Gayle, M.A., et al. 1996. Cloning of a putative ligand for the T1/ST2 receptor. *J. Biol. Chem.* 271: 5784-5789.
- Meisel, C., et al. 2001. Regulation and function of T1/ST2 expression on CD4⁺ T cells: induction of type 2 cytokine production by T1/ST2 cross-linking. *J. Immunol.* 166: 3143-3150.
- Sweet, M.J., et al. 2001. A novel pathway regulating lipopolysaccharide-induced shock by ST2/T1 via inhibition of Toll-like receptor 4 expression. *J. Immunol.* 166: 6633-6639.
- Kuroiwa, K., et al. 2001. Identification of human ST2 protein in the sera of patients with autoimmune diseases. *Biochem. Biophys. Res. Commun.* 284: 1104-1108.
- Tago, K., et al. 2001. Tissue distribution and subcellular localization of a variant form of the human ST2 gene product, ST2V. *Biochem. Biophys. Res. Commun.* 285: 1377-1383.

CHROMOSOMAL LOCATION

Genetic locus: IL1RL1 (human) mapping to 2q12.1; Il1rl1 (mouse) mapping to 1 B.

SOURCE

ST2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ST2 of human 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 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18687 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ST2 (C-20) is recommended for detection of ST2L and ST2S of mouse, rat and human 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).

ST2 (C-20) is also recommended for detection of ST2L and ST2S in additional species, including equine and bovine.

Suitable for use as control antibody for ST2 siRNA (h): sc-40035, ST2 siRNA (m): sc-40036, ST2 shRNA Plasmid (h): sc-40035-SH, ST2 shRNA Plasmid (m): sc-40036-SH, ST2 shRNA (h) Lentiviral Particles: sc-40035-V and ST2 shRNA (m) Lentiviral Particles: sc-40036-V.

Molecular Weight of ST2: 63 kDa.

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.

SELECT PRODUCT CITATIONS

- Zhu, J. and Carver, W. 2012. Effects of interleukin-33 on cardiac fibroblast gene expression and activity. *Cytokine* 58: 368-379.
- Yadav, V.R., et al. 2014. Hemorrhage-induced interleukin-1 receptor pathway in lung is suppressed by 3,5-bis(2-fluorobenzylidene)-4-piperidone in a rat model of hypovolemic shock. *Artif. Organs* 38: 675-683.

RESEARCH USE

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



Try **ST2 (D14L): sc-74297**, our highly recommended monoclonal alternative to ST2 (C-20).