

ST2 (14J07): sc-74296

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

- Bergers, G., et al. 1994. Alternative promoter usage of the Fos-responsive gene Fit-1 generates mRNA isoforms coding for either secreted or membrane-bound proteins related to the IL-1 receptor. *EMBO J.* 13: 1176-1188.
- Tominaga, S., et al. 1996. Assignment of the human ST2 gene to chromosome 2 at q11.2. *Hum. Genet.* 97: 561-563.
- 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 (14J07) is a rat monoclonal antibody raised against an extracellular domain of ST2 of mouse origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

APPLICATIONS

ST2 (14J07) is recommended for detection of ST2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000); non cross-reactive with IL-1RI.

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.

SELECT PRODUCT CITATIONS

- Li, Z.Y., et al. 2019. Contribution of tissue transglutaminase to the severity of hepatic fibrosis resulting from *Schistosoma japonicum* infection through the regulation of IL-33/ST2 expression. *Parasit. Vectors* 12: 302.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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