SANTA CRUZ BIOTECHNOLOGY, INC.

SOCS-3 (87-189): sc-4659 WB



BACKGROUND

The SOCS (suppressor of cytokine signaling) gene family consists of a group of proteins that negatively regulate cytokine signal transduction The SOCS family proteins contain a central SH2 domain and a carboxy-terminal region termed the "SOCS box." The SOCS-1 (also designated SSI-1 and JAB), SOCS-2 (also designated SSI-2 and CIS2) and SOC-3 (also designated SSI-3 and CIS3) genes are known to be upregulated by IL-6 and other cytokines.SOCS-4, SOCS-5, SOCS-6 and SOCS-7 were identified by their sequence homology with the SOCS box. CIS (for cytokine-inducible SH2-containing protein) is also a member of the SOCS family.

REFERENCES

- Yoshimura, A., Ohkubo, T., Kiguchi, T., Jenkins, N.A., Gilbert, D.J., Copeland, N.G., Hara, T. and Miyajima, A. 1995. A novel cytokine-inducible gene CIS encodes an SH2-containing protein that binds to Tyrosine-phosphorylated interleukin 3 and erythropoietin receptors. EMBO J. 14: 2816-2826.
- Starr, R., Willson, T.A., Viney, E.M., Murray, L.J., Rayner, J.R., Jenkins, B.J., Gonda, T.J., Alexander, W.S., Metcalf, D., Nicola, N.A. and Hilton, D.J. 1997. A family of cytokine-inducible inhibitors of signalling. Nature 387: 917-921.
- Matsumoto, A., Masuhara, M., Mitsui, K., Yokouchi, M., Ohtsubo, M., Misawa, H., Miyajima., A. and Yoshimura, A. 1997. CIS, a cytokine inducible SH2 protein, is a target of the JAK/Stat5 pathway and modulates Stat5 activation. Blood 89: 3148-3154
- Nicholson, S.E. and Hilton, D.J. 1998. The SOCS proteins: a new family of negative regulators of signal transduction. J. Leukoc. Biol. 63: 665-668.
- Hilton, D.J., Richardson, R.T., Alexander, W.S., Viney, E.M., Willson, T.A., Sprigg, N.S., Starr, R., Nicholson, S.E., Metcalf, D. and Nicola, N.A. 1998. Twenty proteins containing a C-terminal SOCS box form five structural classes. Proc. Natl. Acad. Sci. USA 95: 114-119.
- van de Geijn, G.J., Gits, J. and Touw, I.P. 2004. Distinct activities of suppressor of cytokine signaling (SOCS) proteins and involvement of the SOCS box in controlling G-CSF signaling. J. Leukoc. Biol. 76: 237-244.
- Torsoni, M.A., Carvalheira, J.B., Calegari, V.C., Bezerra, R.M., Saad, M.J., Gontijo, J.A. and Velloso, L.A. 2004. Angiotensin II (AngII) induces the expression of suppressor of cytokine signaling (SOCS)-3 in rat hypothalamus—a mechanism for desensitization of AngII signaling. J. Endocrinol. 181: 117-128.

CHROMOSOMAL LOCATION

Genetic locus: SOCS3 (human) mapping to 17q25.3; Socs3 (mouse) mapping to 11 E2.

SOURCE

SOCS-3 (87-189) is expressed in *E. coli* as a 38 kDa tagged fusion protein corresponding to amino acids 87-189 of SOCS-3 of human origin.

RESEARCH USE

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

PRODUCT

SOCS-3 (87-189) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

SOCS-3 (87-189) is suitable as a Western blotting control for sc-9023.

STORAGE

Store at -20° C. Stable for one year from the date of shipment. Non-hazard-ous. No MSDS required.