Data Sheet (Cat.No.TMPY-02194)

TargetMol

SOCS3 Protein, Human, Recombinant (His & Trx)

General Information

Synonyms:	SOCS-3;SSI-3;ATOD4;Cish3;SSI3;suppressor of cytokine signaling 3;CIS3
Protein Construction:	A DNA sequence encoding the human SOCS3 (O14543) (Met 1-Leu 225) was fused with a Trx and a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O14543
Molecular Weight:	41.9 kDa (predicted); 46 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 50 mM Tris, pH 8.0. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Suppressor of cytokine signaling 3, also known as SOCS-3, Cytokine-inducible SH2 protein 3, CIS-3, STAT-induced STAT inhibitor 3, SOCS3 and CIS3, is a protein which is widely expressed with high expression in heart, placenta, skeletal muscle, peripheral blood leukocytes, fetal and adult lung, and fetal liver and kidney. SOCS3 / CIS3 contains one SH2 domain and one SOCS box domain. SOCS family proteins form part of a classical negative feedback system that regulates cytokine signal transduction. SOCS3 / CIS3 is involved in negative regulation of

cytokines that signal through the JAK / STAT pathway. SOCS3 / CIS3 inhibits cytokine signal transduction by binding to tyrosine kinase receptors including gp13, LIF, erythropoietin, insulin, IL12, GCSF and leptin receptors. Binding to JAK2 inhibits its kinase activity. SOCS3 / CIS3 suppresses fetal liver erythropoiesis. It regulates onset and maintenance of allergic responses mediated by T-helper type 2 cells. SOCS3 / CIS3 regulates IL-6 signaling. SOCS3 / CIS3 interacts with multiple activated proteins of the tyrosine kinase signaling pathway including IGF1 receptor, insulin receptor and JAK2. SOCS3 / CIS3 could be used as a possible therapeutic agent for treating rheumatoid arthritis.

Reference

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Ekelund E., et al., 2006, Am. J. Hum. Genet. 78:1060-5.