SOCS3 Protein, Human (His-Trx)

Cat. No.:	HY-P73633
Synonyms:	Suppressor of cytokine signaling 3; SOCS-3; CIS-3; SSI-3
Species:	Human
Source:	E. coli
Accession:	O14543 (M1-L225)
Gene ID:	9021
Molecular Weight:	Approximately 46 kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris, pH 8.0. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	SOCS3, a member of the SOCS family, operates within a classical negative feedback system that intricately regulates cytokine signal transduction. Particularly, SOCS3 exerts its influence on the JAK/STAT pathway, engaging in the negative regulation of cytokines. By binding to tyrosine kinase receptors such as IL6ST/gp130, LIF, erythropoietin, insulin, IL12, GCSF, and leptin receptors, SOCS3 effectively inhibits cytokine signal transduction. Notably, its interaction with JAK2 hampers the kinase activity of the latter, thereby modulating IL6 signaling. Beyond its role in signal transduction, SOCS3 plays a critical part in suppressing fetal liver erythropoiesis and regulating the initiation and sustenance of allergic responses mediated by T-helper type 2 cells. Moreover, it serves as a probable substrate recognition component within a SCF-like ECS (Elongin BC-CUL2/5-SOCS-box protein) E3 ubiquitin-protein ligase complex, facilitating the ubiquitination and subsequent proteasomal degradation of target proteins—an aspect integral to protein modification and ubiquitination processes.

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