

STAT6 Protein, Human, Recombinant (His)

General Information

Synonyms:	STAT6C;IL-4-STAT;STAT6B;signal transducer and activator of transcription 6, interleukin-4 induced;D12S1644
Protein Construction:	A DNA sequence encoding the human STAT6 isoform 1 (P42226-1) (Met 1-Trp 847) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ser 2
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P42226-1
Molecular Weight:	95.5 kDa (predicted); 100 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:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 20% gly, 0.3 mM DTT. 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

Signal transducer and activator of transcription 6 (STAT6) is a transcription factor that is activated by interleukin-4 (IL-4)-induced tyrosine phosphorylation and mediates most of the IL-4-induced gene expression. STAT6 plays a central role in exerting interleukin-4 (IL-4) mediated biological responses and is found to induce the expression of BCL2L1/BCL-XL, which is responsible for the anti-apoptotic activity of IL4. Transcriptional activation by STAT6

requires the interaction with coactivators like p300 and the CREB-binding protein (CBP). NF- κ B and tyrosine-phosphorylated Stat6 can directly bind each other in vitro and in vivo, which suggests that the direct interaction between Stat6 and NF- κ B may provide a basis for synergistic activation of transcription by IL-4 and activators of NF- κ B.

Reference

Litterst CM, et al. (2001) Transcriptional activation by STAT6 requires the direct interaction with NCoA-1. J Biol Chem. 276 (49): 45713-21.

Stutz AM, et al. (1999) Functional synergism of STAT6 with either NF-kappa B or PU.1 to mediate IL-4-induced activation of IgE germline gene transcription. J Immunol. 163 (8): 4383-91.

Yang J, et al. (2002) Identification of p100 as a coactivator for STAT6 that bridges STAT6 with RNA polymerase II. EMBO J. 21 (18): 4950-8.

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