

STAT4 Protein, Human (sf9, His)

Cat. No.:	HY-P76664
Synonyms:	Signal transducer and activator of transcription 4; STAT4
Species:	Human
Source:	Sf9 insect cells
Accession:	Q14765 (M1-E748)
Gene ID:	6775
Molecular Weight:	Approximately 87 kDa

PROPERTIES

Appearance	Solution
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 20% glycerol, 0.5 mM DTT.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background

STAT4, a transcriptional regulator predominantly expressed in hematopoietic cells, plays a crucial role in cellular growth, differentiation, and immune response. It is particularly involved in the differentiation of T-helper 1 cells and the production of interferon-gamma, showcasing its significance in orchestrating immune functions. STAT4's engagement in multiple neutrophil activities, including chemotaxis and neutrophil extracellular trap production, further underscores its versatile role. Upon IL12 binding to IL12RB2, STAT4 undergoes tyrosine phosphorylation, leading to homodimerization and nuclear translocation. While IL12 serves as the primary activating signal, STAT4 can also be activated in response to IFN-gamma, IL23, IL2, and IL35. In the context of IFN-alpha/beta signaling, STAT4 acts as a transcriptional repressor, suppressing IL5 and IL13 mRNA expression during T-cell receptor activation. This multifaceted regulatory protein forms homodimers or heterodimers with related family members and interacts with various partners, including ARL2BP, IL12RB2, STAT1, and JUN, contributing to its intricate role in immune modulation.

Caution: Product has not been fully validated for medical applications. For research use only.

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