

## Recombinant Human STAT4, His-tagged

Cat. No. STAT4-8475H Lot. No. (See product label)

### SPECIFICATION

**Product Overview** Recombinant Human STAT4, fused with His tag, was expressed in Sf21 Cells.

**Species** Human

**Source** Sf21 Cells

#### Description

Signal transducer and activator of transcription (STAT) proteins are a family of latent cytoplasmic transcription factors involved in cytokine, hormone, and growth factor signal transduction. Seven members of the STAT family of transcription factors have been identified in mammalian cells: STAT1, STAT2, STAT3, STAT4, STAT5a, STAT5b, and STAT6. STAT proteins mediate broadly diverse biologic processes, including cell growth, differentiation, apoptosis, fetal development, transformation, inflammation, and immune response. Receptor-recruited STATs are phosphorylated on a single tyrosine residue in the carboxy terminal portion. The modified STATs are released from the cytoplasmic region of the receptor subunits to form homodimers or heterodimers through reciprocal interaction between the phosphotyrosine of one STAT and the SH2 domain of another. Following dimerization, STATs rapidly translocate to the nucleus and interact with specific regulatory elements to induce target gene transcription. Recently, STAT-1 has been implicated in modulating pro- and anti-apoptotic genes following several stress-induced responses. These effects are dependent on STAT-1 phosphorylation on serine-727 and require the C-terminal transactivation domain of STAT-1 to enhance its pro-apoptotic effect or inhibit its anti-apoptotic effects. The STAT-1 C-terminal domain has been demonstrated to be important for protein-protein interaction with other transcriptional activators. The

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reports that STAT-1-deficient mice develop spontaneous and chemically induced tumours more rapidly compared to wild-type mice and that STAT-1-deficient cells are more resistant to agents that induce apoptosis strongly support the argument that STAT-1 acts as a tumour suppressor.

**Form** 20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA

**AA Sequence**

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MSQWNQVQQL EIKFLEQVDQ FYDDNFPMEI RHLLAQWIEN QDWEAASNNE
TMATILLQNL LIQLDEQLGR VSKEKNLLLI HNLKRIRKVL QGKFHGNPMH
VAVVISNCLR EERRILAAAN MPVQGGLEKS LQSSVSERQ RNVEHKVAAI
KNSVQMTEQD TKYLEDLQDE FDYRYKTIQT MDQSDKNSAM VNQEVLTLQE
MLNSLDFKRK EALSKMTQII HETDLLMNTM LIEELQDWKR RQQIACIGGP
LHNGLDQLQN CFTLLAESLF QLRRQLEKLE EQSTKMTYEG DPIPQRTHM
LERVTFLIYN LFKNSFVVER QPCMPHPQR PLVLKTLIQF TVKLRLLIKL
PELNYQVKVK ASIDKNVSTL SNRRFVLCGT NVKAMSIEES SNGSLSVEFR
HLQPKEMKSS AGGKGNEGCH MVTEELHSIT FETQICLYGL TIDLETSSLP
VVMISNVSQL PNAWASIIWY NVSTNDSQNL VFFNNPPPAT LSQLEVMWSW
QFSSYVGRGL NSDQLHMLAE KLTVQSSYSD GHLTWAKFCK EHLPGKSFTF
WTWLEAILDL IKKHILPLWI DGYVMGFVSK EKERLLKDK MPGTFLRFS
ESHLGGITFT WVDHSESGEV RFHSVEPYNK GRLSALPFAD ILRDYKVIMA
ENIPENPLKY LYPDIPDKA FGKHYSSQPC EVSRPTERGD KGYVPSVFIP
ISTIRSDSTE PHSPDLLPM SPSVYAVLRE NLSPTTIETA MKSPYSAE
    
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**Purity** >95% as determined by SDS-PAGE

**Storage** -80 °C

**Shipping** Dry Ice

## GENE INFORMATION

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<b>Gene Name</b>	STAT4 signal transducer and activator of transcription 4 [ Homo sapiens ]
<b>Official Symbol</b>	STAT4
<b>Synonyms</b>	STAT4; signal transducer and activator of transcription 4;
<b>Gene ID</b>	6775
<b>mRNA Refseq</b>	NM_003151
<b>Protein Refseq</b>	NP_003142
<b>MIM</b>	600558
<b>UniProt ID</b>	Q14765
<b>Chromosome Location</b>	2q32.2-q32.3
<b>Pathway</b>	Downstream signaling in naive CD8+ T cells, organism-specific biosystem; IL12 signaling mediated by STAT4, organism-specific biosystem; IL12-mediated signaling events, organism-specific biosystem; IL23-mediated signaling events, organism-specific biosystem; IL27-mediated signaling events, organism-specific biosystem; Jak-STAT signaling pathway, organism-specific biosystem; Jak-STAT signaling pathway, conserved biosystem;
<b>Function</b>	calcium ion binding; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; signal transducer activity;

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