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	MSQWNQVQQL EIKFLEQVDQ FYDDNFPMEI RHLLAQWIEN QDWEAASNNE TMATILLQNL LIQLDEQLGR VSKEKNLLLI HNLKRIRKVL QGKFHGNPMH VAVVISNCLR EERRILAAAN MPVQGPLEKS LQSSSVSERQ RNVEHKVAAI KNSVQMTEQD TKYLEDLQDE FDYRYKTIQT MDQSDKNSAM VNQEVLTLQE MLNSLDFKRK EALSKMTQII HETDLLMNTM LIEELQDWKR RQQIACIGGP LHNGLDQLQN CFTLLAESLF QLRRQLEKLE EQSTKMTYEG DPIPMQRTHM LERVTFLIYN LFKNSFVVER QPCMPTHPQR PLVLKTLIQF TVKLRLLIKL PELNYQVKVK ASIDKNVSTL SNRRFVLCGT NVKAMSIEES SNGSLSVEFR HLQPKEMKSS AGGKGNEGCH MVTEELHSIT FETQICLYGL TIDLETSSLP VVMISNVSQL PNAWASIIWY NVSTNDSQNL VFFNNPPPAT LSQLLEVMSW QFSSYVGRGL NSDQLHMLAE KLTVQSSYSD GHLTWAKFCK EHLPGKSFTF WTWLEAILDL IKKHILPLWI DGYVMGFVSK EKERLLLKDK MPGTFLLRFS ESHLGGITFT WVDHSESGEV RFHSVEPYNK GRLSALPFAD ILRDYKVIMA ENIPENPLKY LYPDIPKDKA FGKHYSSQPC EVSRPTERGD KGYVPSVFIP ISTIRSDSTE PHSPSDLLPM SPSVYAVLRE NLSPTTIETA MKSPYSAE
Purity	>95% as determined by SDS-PAGE
Storage	-80 °C
Shipping	Dry Ice

GENE INFORMATION

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Gene Name	STAT4 signal transducer and activator of transcription 4 [Homo sapiens]
Official Symbol	STAT4
Synonyms	STAT4; signal transducer and activator of transcription 4;
Gene ID	6775
mRNA Refseq	NM_003151
Protein Refseq	NP_003142
MIM	600558
UniProt ID	Q14765
Chromosome Location	2q32.2-q32.3
Pathway	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;
Function	calcium ion binding; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; signal transducer activity;

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