Active Recombinant Human STAT1, His-tagged

Cat. No. STAT1-8473H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human STAT1, 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
Bio-activity	1 unit equals 1 ng of purified protein. 1 unit is the amount sufficient for a gel mobility shift assay in a 20 µl reaction; 100 units are sufficient for a protein-protein interaction assay detected by an immuno-blot system.
AA Sequence	MSQWYELQQL DSKFLEQVHQ LYDDSFPMEI RQYLAQWLEK QDWEHAANDV SFATIRFHDL LSQLDDQYSR FSLENNFLLQ HNIRKSKRNL QDNFQEDPIQ MSMIIYSCLK EERKILENAQ RFNQAQSGNI QSTVMLDKQK ELDSKVRNVK DKVMCIEHEI KSLEDLQDEY DFKCKTLQNR EHETNGVAKS DQKQEQLLLK KMYLMLDNKR KEVVHKIIEL LNVTELTQNA LINDELVEWK RRQQSACIGG PPNACLDQLQ NWFTIVAESL QQVRQQLKKL EELEQKYTYE HDPITKNKQV LWDRTFSLFQ QLIQSSFVVE RQPCMPTHPQ RPLVLKTGVQ FTVKLRLLVK LQELNYNLKV KVLFDKDVNE RNTVKGFRKF NILGTHTKVM NMEESTNGSL AAEFRHLQLK EQKNAGTRTN EGPLIVTEEL HSLSFETQLC QPGLVIDLET TSLPVVVISN VSQLPSGWAS ILWYNMLVAE PRNLSFFLTP PCARWAQLSE VLSWQFSSVT KRGLNVDQLN MLGEKLLGPN ASPDGLIPWT RFCKENINDK NFPFWLWIES ILELIKKHLL PLWNDGCIMG FISKERERAL LKDQQPGTFL LRFSESSREG AITFTWVERS QNGGEPDFHA VEPYTKKELS AVTFPDIIRN YKVMAAENIP ENPLKYLYPN IDKDHAFGKY YSRPKEAPEP MELDGPKGTG YIKTELISVS EVHPSRLQTT DNLLPMSPEE FDEVSRIVGS VEFDSMMNTV
Purity	>95% as determined by SDS-PAGE
Storage	-80 °C

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Shipping	Dry Ice

GENE INFORMATION

Gene Name	STAT1 signal transducer and activator of transcription 1, 91kDa [Homo sapiens]
Official Symbol	STAT1
Synonyms	STAT1; signal transducer and activator of transcription 1, 91kDa; signal transducer and activator of transcription 1, 91kD; signal transducer and activator of transcription 1-alpha/beta; ISGF 3; STAT91; transcription factor ISGF 3 components p91/p84; transcription factor ISGF-3 components p91/p84; signal transducer and activator of transcription-1; CANDF7; ISGF-3; DKFZp686B04100;
Gene ID	6772
mRNA Refseq	NM_007315
Protein Refseq	NP_009330
MIM	600555
UniProt ID	P42224
Chromosome Location	2q32.2-q32.3
Pathway	Adipogenesis, organism-specific biosystem; Antiviral mechanism by IFN-stimulated genes, organism-specific biosystem; B Cell Receptor Signaling Pathway, organism-specific biosystem; CXCR4-mediated signaling events, organism-specific biosystem; Chemokine signaling pathway, organism-specific biosystem; Chemokine signaling

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	pathway, conserved biosystem; Cytokine Signaling in Immune system, organism-specific biosystem;
Function	RNA polymerase II core promoter sequence-specific DNA binding; RNA polymerase II core promoter sequence-specific DNA binding transcription factor activity; calcium ion binding; double-stranded DNA binding; enzyme binding; non-membrane spanning protein tyrosine kinase activity; protein binding; protein homodimerization activity; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; NOT sequence-specific DNA binding transcription factor activity; signal transducer activity; tumor necrosis factor receptor binding;

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