Active Recombinant Human STAT1

Cat. No. STAT1-1164H **Lot. No.** (See product label)

SPECIFICATION

Species	Human
Source	Sf9 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. 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 stressinduced 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 antiapoptotic effects. The STAT-1 C-terminal domain has been demonstrated to be important for protein-protein interaction with other transcriptional activators. The reports that STAT-1-deficient mice develop spontaneous and chemically induced tumours more rapidly compared to wildtype 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.

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Application	Use only for Research and not for Drug or Diagnostic purposes. STAT1 can be used for gel mobility shift assay, for protein-protein and small molecules-protein interactions assay.
Usage	For in vitro use only.
Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 20% glycerol, 100 mM KCl, 0.2 mM EDTA and 1 mM DTT.
Activity	1 ng is the amount sufficient for a gel mobility shift assay in a 20µl reaction, 100 ng are sufficient for a proteinprotein interaction assay detected by immuno-blot system.
Purity	> 95% by SDS-PAGE.
Storage	Quality guaranteed for 12 months, store at -80°C. Avoid freeze / thaw cycles.

GENE INFORMATION

Gene Name	STAT1 signal transducer and activator of transcription 1, 91kDa [Homo sapiens]
Synonyms	STAT1; signal transducer and activator of transcription 1, 91kDa; ISGF-3; STAT91; DKFZp686B04100; OTTHUMP00000205845; signal transducer and activator of transcription 1; signal transducer and activator of transcription-1; transcription factor ISGF-3 components p91/p84
Gene ID	6772
mRNA Refseq	NM_007315
Protein Refseq	NP_009330

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MIM	600555
UniProt ID	P42224
Chromosome Location	2q32.2
Pathway	Chemokine signaling pathway; Jak-STAT signaling pathway; Pancreatic cancer; Toll-like receptor signaling pathway; Signaling by PDGF
Function	calcium ion binding; matopoietin/interferon-class (D200-domain) cytokine receptor signal transducer activity; protein binding; sequence-specific DNA binding; signal transducer activity; transcription factor activity

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