

STAT4/Recombinant Human Signal Transducer and Activator of Transcription 4

Catalog No.	CSI11059	Quantity:	10 µg
Alternate Names:	SLEB11		
Description:	<p>Recombinant human STAT4. STAT proteins have the dual function of signal transduction and activation of transcription. These proteins are activated by phosphorylation on tyrosine in response to different ligands after which they form homodimers or heterodimers that translocate to the cell nucleus where they either directly bind to DNA or act together with other DNA-binding proteins in multiprotein transcription complexes to direct transcription. STAT4 is phosphorylated in response to interleukin 12 and is essential for IL12 signal transduction. STAT4 is expressed in specific tissues, including spleen, heart, brain, peripheral blood cells, and testis. Cell-mediated immunity is dependent on IL12 production by macrophages and dendritic cells, which in turn stimulates IFNG (147570) secretion by natural killer cells and leads to Th1 cell activation. Intestinal T cells from Crohn disease patients, but not healthy volunteers, showed constitutive activation of STAT3 and STAT4, suggesting that there is abnormal STAT/SOCS signaling in Crohn disease. The N-terminal protein interaction domain (N domain) of STAT4 is required for STAT4 activation after IL12 signaling. Mutations in the N domain of STAT4 block N-domain dimerization and the assembly of nonphosphorylated STAT4 dimers and prevent STAT4 phosphorylation by cytokine receptors. N-domain dimerization was observed for other STAT family members, but was homotypic in character. It is proposed that the preassociation of nonphosphorylated STAT dimers may allow the formation of active dimers after activation.</p>		
Gene ID:	6775		
Protein Accession No:	NP_003142		
Source:	Sf9 insect cells		
Formulation:	Liquid in 20 mM Tris-Cl + 25% glycerol + 100 mM KCl + 1 mM DTT + 0.2 mM EDTA		
Purity:	> 95% as determined by SDS-PAGE analysis		
Specific Activity:	1 ng is the amount sufficient for a gel mobility shift assay in a 20 µl reaction, 100 ng are sufficient for a protein-protein interaction assay detected by immuno-blot system.		
Applications:	<p>Useful for gel mobility shift assay, for protein-protein and small molecules-protein interactions assays.</p> <p>The optimal concentration should be determined by the user for each specific application.</p>		
Storage & Stability:	Stable for 1 year at -80°C. Avoid repeated freeze-thaw cycles.		

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

