

Active Recombinant Human SP1, GST-tagged

Cat. No. SP1-8511H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human SP1,fused with GST tag,was expressed in E. coli.
Species	Human
Source	E.coli
Description	Sp1 was first detected in HeLa cells on the basis of its ability to activate the SV40 early promoter transcription . Subsequently it was shown to recognize and bind selectively to a GC-rich consensus sequence (GC-box: GGGCGG or CACCC) that presents in the promoter of several important cellular genes, including SV40 early, HIV-1, PDGF-B etc. Sp1 was the first transcription factor to be cloned and . Analysis of structure and function has revealed that Sp1 can be separated into discrete functional domains. The DNA-binding domain consists of three zinc fingers that specifically bind to the GC-box element . Sp1 contains at least four separate transcriptional activation domains. Two of these domains are glutamine-rich, a well-characterized motif found in several other transcription factors . In addition to transcription, Sp1 function has been linked to cell growth, cancer, Huntington disease and other disorders through transcriptional regulation or specific protein-protein interactions. The function of Sp1 can be regulated by phosphorylation and glycosylation.
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. 100 units (ng) are sufficient for a protein-protein

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interaction assay.

AA Sequence

NSVSAATLTP SSQAVTISSS GSQESGSQPV TSGTTISSAS LVSSQASSSS
 FFTNANSYST TTTTNSMGIM NFTTSGSSGT NSQGQTPQRV SGLQGSDALN
 IQQNQTSGGS LQAGQQKEGE QNQQTQQQI LIQPQLVQGG QALQALQAAP
 LSGQTFTTQA ISQETLQNLQ LQAVPNSGPI IIRTPTVGPN GQVSWQTLQL
 QNLQVQNPQA QTITLAPMQG VSLGQTSSSN TTLTPIASAA SIPAGTVTVN
 AAQLSSMPGL QTINLSALGT SGIQVHPIQG LPLAIANAPG DHGAQLGLHG
 AGGDGIHDDT AGGEEGENSP DAQPQAGRRT RREACTCPYC KDSEGRGSGD P

Purity

>95% as determined by SDS-PAGE

Storage

-80 °C

Concentration

300 µg/ml

Shipping

Dry Ice

GENE INFORMATION

Gene Name

SP1 Sp1 transcription factor [Homo sapiens]

Official Symbol

SP1

Synonyms

SP1; Sp1 transcription factor; transcription factor Sp1; specificity protein 1;

Gene ID

6667

mRNA Refseq

NM_138473

Protein Refseq

NP_612482

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MIM	189906
UniProt ID	P08047
Chromosome Location	12q13.1
Pathway	Adipogenesis, organism-specific biosystem; Androgen Receptor Signaling Pathway, organism-specific biosystem; C-MYB transcription factor network, organism-specific biosystem; Direct p53 effectors, organism-specific biosystem; E2F transcription factor network, organism-specific biosystem; EGFR1 Signaling Pathway, organism-specific biosystem; Estrogen signaling pathway, organism-specific biosystem;
Function	DNA binding; HMG box domain binding; RNA polymerase II core promoter proximal region sequence-specific DNA binding; RNA polymerase II core promoter proximal region sequence-specific DNA binding transcription factor activity involved in positive regulation of transcription; RNA polymerase II repressing transcription factor binding; bHLH transcription factor binding; double-stranded DNA binding; enhancer binding; histone acetyltransferase binding; histone deacetylase binding; metal ion binding; protein C-terminus binding; protein binding; protein homodimerization activity; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; transcription factor binding; transcription regulatory region DNA binding; zinc ion binding;