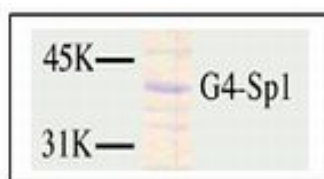


GAL4-Sp1Q

Positive regulator of galactose inducible genes, GAL4(94) fused to transcription factor Sp1(266-516)
human, recombinant, *E. coli*

| Cat. No. | Amount |
|----------|-----------|
| PR-720 | 4 μ g |



For *in vitro* use only
Quality guaranteed for 12 months
Store at -80°C

Avoid freeze / thaw cycles

Form

Liquid. Supplied in 20 mM Tris-HCl, pH 7.9, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20% glycerol.

Activity

20 ng are sufficient for reconstituted transcription assay and 100 ng are sufficient for a protein-protein interaction assay.

Purity

> 90% by SDS-PAGE.

Description

The GAL4 protein of yeast activates the transcription of several genes involved in galactose metabolism. This event requires that GAL4 bind to upstream activation sites with the consensus sequence 5'-CGGN5(T/A)N5CCG-3'. A fragment of the GAL4 protein, comprising amino acids 1-147, binds DNA but fails to activate transcription. Sp1 is a member of a transcription factor family characterized by a highly conserved DNA-binding domain consisting of three zinc fingers. This sequence-specific DNA binding protein activates RNA Pol II transcription from promoters containing GC boxes. The ubiquitously expressed Sp1 protein has been implicated in the activation of a very large number of genes and is thought to be involved in cellular processes such as cell cycle regulation, chromatin remodeling and the propagation of methylation-free islands. It contains several trans-activating domains, including a glutamine-rich region of 160 amino acids that is able to activate transcription in a cell-free system when fused to the DNA-binding domain of a heterologous protein (e.g. GAL4). In addition, Sp1 has been shown to interact with E2F1 and p107. Sp1 is phosphorylated and glycosylated *in vivo*.

Recombinant GAL4-Sp1 is isolated from an *E. coli* strain that carries the coding sequence of the fused protein under the control of a T7 promoter.

GAL4-Sp1 has been applied in *in vitro* transcription assays, protein-protein interaction assays and chromatin remodeling assays.

Protein is greater than 90% homogeneous and contains no detectable protease, DNase, and RNase activity.

Selected References:

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Lin *et al.* (1996) Cell cycle-regulated association of E2F1 and Sp1 is related to their functional interaction. *Mol. Cell. Biol.* **16**:1668.

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