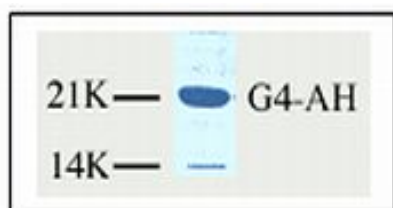


GAL4-AH

Positive regulator of galactose inducible genes, GAL4(1-147) fused to an α -Helix human, recombinant, *E. coli*

Cat. No.	Amount
PR-717	10 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 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT and 20% glycerol.

Activity

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

Purity

>95% by SDS-PAGE

Description

Transcriptional activity is greatly stimulated by promoter-specific activator proteins. These are modular proteins, consisting of a DNA-binding domain and a regulatory (activator) domain. 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. Linking of an acidic synthetic peptide, forming an α -helix (AH), to this GAL4 DNA-binding domain, results in a protein with an amphiphathic structure. This fusion protein is able to activate transcription of a gene, bearing the GAL4 binding sites in an *in vitro* transcription system by targeting TFIIB in the preinitiation complex.

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

GAL4-AH has been applied in *in vitro* transcription assays and protein-protein interaction assays.

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

Selected References:

- Lewin (1990) Commitment and activation at pol II promoters: a tail of protein-protein interactions. *Cell* **61**:1161.
 Ptashne *et al.* (1990) Activators and targets. *Nature* **346**:329.
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 Ma *et al.* (1987) A new class of yeast transcriptional activators. *Cell* **51**:113.
 Kodadek (1993) How does the GAL4 transcription factor recognize the appropriate DNA binding sites *in vivo*? *Cell. Mol. Biol. Res.* **39**:355.
 Keegan *et al.* (1986) Separation of DNA binding from the transcription-activating function of a eukaryotic regulatory protein. *Science* **231**:699.
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 Lin *et al.* (1988) GAL4 derivatives function alone and synergistically with mammalian activators *in vitro*. *Cell* **54**:659.
 Lin *et al.* (1991) Mechanism of action of an acidic transcriptional activator *in vitro*. *Cell* **64**:971.