SANTA CRUZ BIOTECHNOLOGY, INC.

B42 (1-104): sc-4269 WB

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The GAL4 protein of *Saccharomyces cerevisiae* is one of the most thoroughly characterized transcriptional activators. Since the N-terminal 147 amino acid residues of GAL4 are sufficient to mediate specific and strong binding to DNA, but are incapable of efficient transcriptional activation, this protein fragment has frequently been used to confer specific DNA binding in experiments examining transcriptional activation functions of heterologous proteins. This approach is facilitated by the finding that higher eukaryotes lack endogenous proteins that enhance transcription from the consensus GAL4-binding site. Fusions between GAL4 (amino acids 1-147) and activating domains from a variety of transcriptional regulatory proteins can activate transcription in yeast, plant, insects and mammalian cells. A unique "two-hybrid" system has been developed using GAL4 fusions in yeast to identify specific protein-protein interactions. Another "two-hybrid" system has been developed using the DNA binding domain (DBD) of the *E. coli* protein Lex A and the transcriptional activation domain (TAD) of the bacterially-derived B42 gene.

REFERENCES

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4. Ptashne, M. and Gann, A.A.F. 1990. Activators and targets. Nature 346: 329-331.
5. Song, O., Dolan, J.W., Yuan, Y.O. and Fields, S. 1991. Pheromone-dependent phosphorylation of the yeast STE12 protein correlates with transcriptional activation. Genes Dev. 5: 741-750.
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7. Sadowski, I., Bell, B., Broad, P. and Hollis, M. 1992. GAL4 fusion vectors for expression in yeast or mammalian cells. Gene 118: 137-141.
8. Fields, S. 1993. The two-hybrid system to detect protein-protein interactions. In Carter, et al. Methods: A Companion to Methods Enzymol. 5: 116-124.

SOURCE

B42 (1-104) is produced in *E. coli* as 37 kDa tagged fusion protein corresponding to amino acids 1-104 representing full length B42.

PRODUCT

B42 (1-104) is purified by bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 1.0 ml SDS-PAGE loading buffer.

APPLICATIONS

B42 (1-104) is suitable for as a Western blotting control for sc-8606 and sc-8607.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.