

## Lex A (D-19): sc-1726

### 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 utilizes the DNA binding domain of the *E. coli* protein Lex A and the transactivity domain of the HSV protein VP16.

### REFERENCES

1. Johnston, M. 1987. A model fungal gene regulatory mechanism: the GAL genes of *Saccharomyces cerevisiae*. Microbiol. Rev. 51: 458-476.
2. Ma, J., et al. 1987. Deletion analysis of GAL4 defines two transcriptional activating segments. Cell 48: 847-853.
3. Fields, S., et al. 1989. A novel genetic system to detect protein-protein interactions. Nature 340: 245-246.
4. Ptashne, M., et al. 1990. Activators and targets. Nature 346: 329-331.

### SOURCE

Lex A (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within the DNA binding domain of Lex A of *E. coli* origin.

### PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1726 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-1726 AC, 500 µg/0.25 ml agarose in 1 ml.

### APPLICATIONS

Lex A (D-19) is recommended for detection of Lex A and Lex A fusion proteins of N/A origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

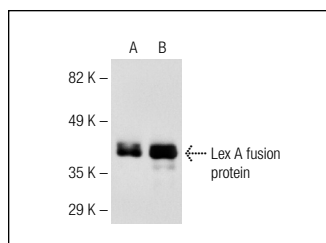
### STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

### RESEARCH USE

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

### DATA



Western blot analysis of a Lex A fusion protein using Lex A (N-19): sc-1725 (A) and Lex A (D-19): sc-1726 (B).

### SELECT PRODUCT CITATIONS

1. Koipally, J., et al. 1999. Repression by Ikaros and Aiolos is mediated through histone deacetylase complexes. EMBO J. 18: 3090-3100.
2. Garcia-Guzman, M., et al. 1999. Cell adhesion regulates the interaction between the docking protein p130Cas and the 14-3-3 proteins. J. Biol. Chem. 274: 5762-5768.
3. Sasaki, A., et al. 2000. CIS3/SCOS-3 suppresses erythropoietin (EPO) signaling by binding the EPO receptor and JAK2. J. Biol. Chem. 275: 29338-29347.
4. Simard, C., et al. 2004. Self-interacting domains in the C-terminus of a cation-Cl<sup>-</sup> cotransporter described for the first time. J. Biol. Chem. 279: 40769-40777.
5. Simard, C.F., et al. 2004. Characterization of a novel interaction between the secretory Na<sup>+</sup>-K<sup>+</sup>-Cl<sup>-</sup> cotransporter and the chaperone HSP 9. J. Biol. Chem. 279: 48449-48456.
6. Jiang, H., et al. 2005. Runx1 binds positive transcription elongation factor β and represses transcriptional elongation by RNA polymerase II: possible mechanism of CD4 silencing. Mol. Cell. Biol. 25: 10675-10683.
7. Connelly, J.J., et al. 2006. Structure and function of the *Saccharomyces cerevisiae* Sir3 BAH domain. Mol. Cell. Biol. 26: 3256-3265.
8. Ivanov, A.V., et al. 2007. PHD domain-mediated E3 ligase activity directs intramolecular sumoylation of an adjacent bromodomain required for gene silencing. Mol. Cell. 28: 823-837.
9. Tompkins, J.D., et al. 2009. Evidence for a direct involvement of hMSH5 in promoting ionizing radiation induced apoptosis. Exp. Cell Res. 315: 2420-2432.

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Try **Lex A (C-11): sc-390386** or **Lex A (2-12): sc-7544**, our highly recommended monoclonal alternatives to Lex A (D-19). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Lex A (C-11): sc-390386**.