SANTA CRUZ BIOTECHNOLOGY, INC.

# Lex A (C-11): sc-390386

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 that is rapidly gaining in popularity 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. and Ptashne, M. 1987. Deletion analysis of GAL4 defines two transcriptional activating segments. Cell 48: 847-853.
3. Fields, S. and Song, O. 1989. A novel genetic system to detect protein-protein interactions. Nature 340: 245-246.
4. Ptashne, M. and Gann, A.A.F. 1990. Activators and targets. Nature 346: 329-331.
5. Song, O., et al. 1991. Pheromone-dependent phosphorylation of the yeast STE12 protein correlates with transcriptional activation. Genes Dev. 5: 741-750.


## SOURCE

Lex A (C-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 19-55 within the DNA binding domain of Lex A of *E. coli* origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Lex A (C-11) is available conjugated to agarose (sc-390386 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390386 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390386 PE), fluorescein (sc-390386 FITC), Alexa Fluor® 488 (sc-390386 AF488), Alexa Fluor® 546 (sc-390386 AF546), Alexa Fluor® 594 (sc-390386 AF594) or Alexa Fluor® 647 (sc-390386 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390386 AF680) or Alexa Fluor® 790 (sc-390386 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390386 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

Lex A (C-11) is recommended for detection of Lex A and Lex A fusion proteins by Western Blotting (starting dilution 1:100, 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).

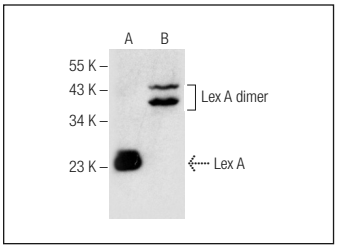
Molecular Weight of Lex A: 23 kDa.

Positive Controls: *E. coli* whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




Lex A (C-11): sc-390386. Western blot analysis of *E. coli* recombinant Lex A (**A**) and Lex A dimer expression in *E. coli* whole cell lysate (**B**).

## SELECT PRODUCT CITATIONS


1. Chen, G., et al. 2021. Identification and screening of host proteins interacting with ORFV-ORF047 protein. Virol. J. 18: 27.
2. Brumm, S., et al. 2022. N-terminal domain of ARF-GEF GNOM prevents heterodimerisation with functionally divergent GNL1 in Arabidopsis. Plant J. E-published.


## 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.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