SANTA CRUZ BIOTECHNOLOGY, INC.

Lex A (2-12): sc-7544

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.

SOURCE

Lex A (2-12) is a mouse monoclonal antibody epitope mapping within the DNA binding domain of Lex A.

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 (2-12) is available conjugated to agarose (sc-7544 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-7544 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-7544 PE), fluorescein (sc-7544 FITC), Alexa Fluor® 488 (sc-7544 AF488), Alexa Fluor® 546 (sc-7544 AF546), Alexa Fluor® 594 (sc-7544 AF594) or Alexa Fluor® 647 (sc-7544 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-7544 AF680) or Alexa Fluor® 790 (sc-7544 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Lex A (2-12) is recommended for detection of Lex A and Lex A fusion proteins 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Molecular Weight of Lex A: 23 kDa.

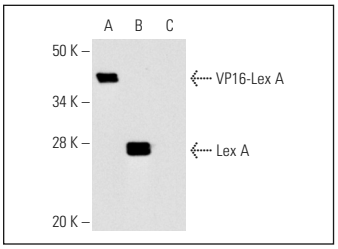
RECOMMENDED SUPPORT REAGENTS

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.

STORAGE

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

DATA



Lex A (2-12): sc-7544. Western blot analysis of recombinant VP16-Lex A (**A**) and Lex A (**B**) proteins and untransformed *E. coli* cell lysate (**C**).

SELECT PRODUCT CITATIONS

1. Postigo, A.A. 2003. Opposing functions of ZEB proteins in the regulation of the TGFβ/BMP signaling pathway. EMBO J. 22: 2443-2452.
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3. Nouvion, A.L., et al. 2007. Modulation of Nr-13 antideath activity by peptide aptamers. Oncogene 26: 701-710.
4. Wang, H. 2008. Liver X receptor α is a transcriptional repressor of the uncoupling protein 1 gene and the brown fat phenotype. Mol. Cell. Biol. 28: 2187-2200.
5. Mercier, A. and Labbé, S. 2009. Both Php4 function and subcellular localization are regulated by iron via a multistep mechanism involving the glutaredoxin Grx4 and the exportin Crm1. J. Biol. Chem. 284: 20249-20262.
6. Lee, G.E., et al. 2010. DNA methyltransferase 1-associated protein (DMAP1) is a co-repressor that stimulates DNA methylation globally and locally at sites of double strand break repair. J. Biol. Chem. 285: 37630-37640.
7. Romá-Mateo, C., et al. 2011. Laforin, a dual-specificity phosphatase involved in Lafora disease, is phosphorylated at Ser25 by AMP-activated protein kinase. Biochem. J. 439: 265-275.
8. Gomar-Alba, M., et al. 2013. Dissection of the elements of osmotic stress response transcription factor Hot1 involved in the interaction with MAPK Hog1 and in the activation of transcription. Biochim. Biophys. Acta 1829: 1111-1125.
9. Yamada, K., et al. 2016. The *Arabidopsis* CERK1-associated kinase PBL27 connects chitin perception to MAPK activation. EMBO J. 35: 2468-2483.

RESEARCH USE

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