SANTA CRUZ BIOTECHNOLOGY, INC.

VP16 (V-20): sc-1728

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

SOURCE

VP16 (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within the transcriptional activation domain of VP16 of herpes virus 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-1728 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VP16 (V-20) is recommended for detection of VP16 and VP16 fusion proteins 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).

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

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

SELECT PRODUCT CITATIONS

1. Albanese, C., et al. 2000. Sustained mammary gland-directed, ponasterone A-inducible expression in transgenic mice. FASEB J. 14: 877-884.
2. Renaud, J.P., et al. 2000. Structure-function analysis of the Rev-erbA and RVR ligand-binding domains reveals a large hydrophobic surface that mediates corepressor binding and a ligand cavity occupied by side chains. Mol. Endocrinol. 14: 700-717.
3. Vincent, K.A., et al. 2000. Angiogenesis is induced in a rabbit model of hindlimb ischemia by naked DNA encoding an HIF-1α/VP16 hybrid transcription factor. Circulation 102: 2255-2261.
4. Yedowitz, J.C., et al. 2005. Nuclear localizations of the herpes simplex virus type 1 tegument proteins VP13/14, VHS, and VP16 precede VP22-dependent microtubule reorganization and VP22 nuclear import. J. Virol. 79: 4730-4743.
5. Kamen, D.E., et al. 2005. Structural basis for the physiological temperature dependence of the association of VP16 with the cytoplasmic tail of herpes simplex virus glycoprotein H. J. Virol. 79: 6134-6141.
6. Ghosh, A., et al. 2006. The N-terminal lysine residue-rich domain II and the 340-430 amino acid segment of eukaryotic initiation factor 2-associated glycoprotein p67 are the binding sites for the γ-subunit of eIF2. Exp. Cell Res. 312: 3184-3203.
7. Cun, W., et al. 2009. Transcriptional regulation of the herpes simplex virus 1α-gene by the viral immediate-early protein ICP22 in association with VP16. Sci. China, C, Life Sci. 52: 344-351.
8. Yang, K. and Baines, J.D. 2011. Selection of HSV capsids for envelopment involves interaction between capsid surface components pUL31, pUL17, and pUL25. Proc. Natl. Acad. Sci. USA 108: 14276-14281.
9. Kim, H., et al. 2013. Cell-cell interactions influence vascular reprogramming by Prox1 during embryonic development. PLoS ONE 8: e52197.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.