SANTA CRUZ BIOTECHNOLOGY, INC.

Adenovirus-2/5 E1A (M73): sc-25

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The early region (E1) of the adenovirus genome, responsible for transforming activity, is localized within the leftmost 11% of the viral genome and consists of two transcriptional units, E1A and E1B. Region E1A is sufficient for partial transformation and immortalization of primary cells, whereas the E1B function is normally required for complete transformation. In addition to their essential role in transformation, E1A gene products are necessary for normal levels of transcription of the other early regions of the adenovirus genome during productive infection and are able to either activate or repress the transcription of specific cellular genes. E1A oncogene proteins form specific complexes with cellular proteins. These include the Rb protein, which is the product of the retinoblastoma gene, and the human cyclin A protein. E1A immunoprecipitates also contain the cyclin dependent kinase Cdk2.

SOURCE

Adenovirus-2/5 E1A (M73) is a mouse monoclonal antibody raised against a bacterial trpE-E1A fusion protein.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Adenovirus-2/5 E1A (M73) is available conjugated to agarose (sc-25 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-25 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-25 PE), fluorescein (sc-25 FITC), Alexa Fluor® 488 (sc-25 AF488), Alexa Fluor® 546 (sc-25 AF546), Alexa Fluor® 594 (sc-25 AF594) or Alexa Fluor® 647 (sc-25 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-25 AF680) or Alexa Fluor® 790 (sc-25 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Adenovirus-2/5 E1A (M73) is recommended for detection of E1A antigens of Adenovirus-2 and Adenovirus-5 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 Adenovirus-2/5 E1A: 48-54 kDa.

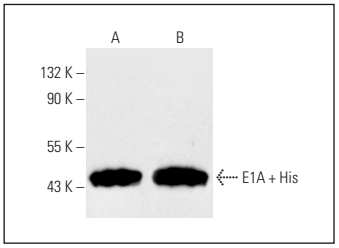
RECOMMENDED SUPPORT REAGENTS

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.

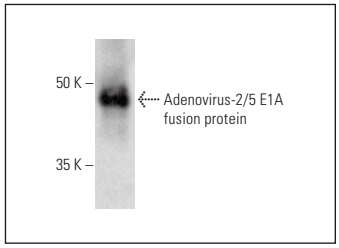
STORAGE

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

DATA



Western blot analysis of polyhistidine-tagged recombinant Adenovirus-2 E1A (13S): sc-4021 WB. Antibodies tested include Adenovirus-2/5 E1A (M73): sc-25 (**A**) and Adenovirus-2/5 E1A (13 S-5): sc-430 (**B**).



Adenovirus-2/5 E1A (M73) HRP: sc-25 HRP. Direct western blot analysis of bacterial E-E1A recombinant Adenovirus-2/5 E1A fusion protein.

SELECT PRODUCT CITATIONS

1. Stacey, D.W., et al. 1994. The adenovirus E1A protein overrides the requirement for cellular ras in initiating DNA synthesis. EMBO J. 13: 6107-6114.
2. Wang, S.X., et al. 2005. Cell cycle-mediated regulation of smooth muscle α-Actin gene transcription in fibroblasts and vascular smooth muscle cells involves multiple adenovirus E1A-interacting cofactors. J. Biol. Chem. 280: 6204-6214.
3. Zhao, L.J., et al. 2006. Changes in C-terminal binding protein 2 (CtBP2) corepressor complex induced by E1A and modulation of E1A transcriptional activity by CtBP2. J. Biol. Chem. 281: 36613-36623.
4. Kadeppagari, R.K., et al. 2009. Adenovirus transforming protein E1A induces c-Myc in quiescent cells by a novel mechanism. J. Virol. 83: 4810-4822.
5. Komorek, J., et al. 2010. Adenovirus type 5 E1A and E6 proteins of low-risk cutaneous β-human papillomaviruses suppress cell transformation through interaction with FOXK1/K2 transcription factors. J. Virol. 84: 2719-2731.
6. Romanov, V.S., et al. 2011. p21 Waf1 is required for complete oncogenic transformation of mouse embryo fibroblasts by E1Aad5 and c-Ha-Ras oncogenes. Biochimie 93: 1408-1414.
7. Nishibe, R., et al. 2013. CIZ1, a p21 Waf1/Cip1-interacting protein, functions as a tumor suppressor *in vivo*. FEBS Lett. 587: 1529-1535.
8. Cimas, F.J., et al. 2015. MKP1 mediates chemosensitizer effects of E1a in response to cisplatin in non-small cell lung carcinoma cells. Oncotarget 6: 44095-44107.
9. Adrados, I., et al. 2016. The homeoprotein SIX1 controls cellular senescence through the regulation of p16 INK4A and differentiation-related genes. Oncogene 35: 3485-3494.

RESEARCH USE

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