

Adenovirus-5 E1A (M58): sc-58658

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 a protein (pRb), which is the product of the retinoblastoma gene, and the human cyclin A protein. E1A immunoprecipitates also contain the cyclin dependent kinase Cdk2.

REFERENCES

- Gallimore, P.H., et al. 1974. Viral DNA in transformed cells II. A study of the sequences of adenovirus and DNA in nine lines of transformed rat cells using specific fragments of the viral genome. *J. Mol. Biol.* 89: 49-72.
- Jones, N. and Shenk, T. 1979. An adenovirus type 5 early gene function regulates expression of other early viral genes. *Proc. Natl. Acad. Sci. USA* 76: 3665-3669.
- Berk, A.J., et al. 1979. Pre-early adenovirus 5 gene product regulates synthesis of early viral messenger RNAs. *Cell* 17: 935-944.

SOURCE

Adenovirus-5 E1A (M58) is a mouse monoclonal antibody raised against Adenovirus-5 E1A.

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-5 E1A (M58) is available conjugated to agarose (sc-58658 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-58658 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-58658 PE), fluorescein (sc-58658 FITC), Alexa Fluor[®] 488 (sc-58658 AF488), Alexa Fluor[®] 546 (sc-58658 AF546), Alexa Fluor[®] 594 (sc-58658 AF594) or Alexa Fluor[®] 647 (sc-58658 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-58658 AF680) or Alexa Fluor[®] 790 (sc-58658 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Adenovirus-5 E1A (M58) is recommended for detection of Adenovirus-5 E1A 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

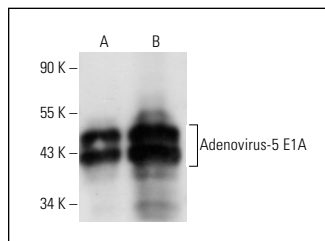
Molecular Weight of Adenovirus-5 E1A: 30-50 kDa.

Positive Controls: I-AC whole cell lysate or II-ACS whole cell lysate.

STORAGE

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

DATA



Adenovirus-5 E1A (M58): sc-58658. Western blot analysis of Adenovirus-5 E1A expression in I-AC (A) and II-ACS (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Romanov, V.S., et al. 2014. Novel mechanism of JNK pathway activation by adenoviral E1A. *Oncotarget* 5: 2176-2186.
- Li, W., et al. 2015. Glial fibrillary acidic protein promoters direct adenovirus early 1A gene and human telomerase reverse transcriptase promoters direct sodium iodide symporter expression for malignant glioma radioiodine therapy. *Mol. Cell. Biochem.* 399: 279-289.
- Ran, L., et al. 2016. Delivery of oncolytic adenovirus into the nucleus of tumorigenic cells by tumor microparticles for virotherapy. *Biomaterials* 89: 56-66.
- Kochetkova, E.Y., et al. 2017. Targeted elimination of senescent Ras-transformed cells by suppression of MEK/ERK pathway. *Aging* 9: 2352-2375.
- Moreau, P., et al. 2018. Tridimensional infiltration of DNA viruses into the host genome shows preferential contact with active chromatin. *Nat. Commun.* 9: 4268.
- Katoh, I., et al. 2019. C-terminal α domain of p63 binds to p300 to coactivate β -catenin. *Neoplasia* 21: 494-503.
- Lypova, N., et al. 2019. Targeting palbociclib-resistant estrogen receptor-positive breast cancer cells via oncolytic virotherapy. *Cancers* 11: 684.
- Akaike, Y., et al. 2020. Aberrant activation of cyclin A-Cdk induces G₂/M-phase checkpoint in human cells. *Cell Cycle* 19: 84-96.
- Mikawa, Y., et al. 2020. Conditionally replicative adenovirus controlled by the stabilization system of AU-rich elements containing mRNA. *Cancers* 12: 1205.
- Hossain, E., et al. 2020. Advantages of using paclitaxel in combination with oncolytic adenovirus utilizing RNA destabilization mechanism. *Cancers* 12: 1210.

RESEARCH USE

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

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