SANTA CRUZ BIOTECHNOLOGY, INC.

HPV18 E7 (N-19): sc-1590

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The Power to Question

BACKGROUND

Human papilloma viruses (HPVs) can be classified as either high risk or low risk according to their association with cancer. HPV16 and HPV18 are the most common of the high risk group while HPV6 and HPV11 are among the low risk types. Approximately 90% of cervical cancers contain HPV DNA of the high risk types. Mutational analysis have shown that the E6 and E7 genes of the high risk HPVs are necessary and sufficient for HPV transforming function. The specific interactions of the E6 and E7 proteins with p53 and pRB, respectively, correlate with HPV high and low risk classifications. The high risk HPV E7 proteins bind to pRB with a higher affinity than do the low risk HPV proteins, and only the high risk HPV E6 proteins form detectable complexes with p53 *in vitro*.

REFERENCES

1. Reich, N.C., et al. 1983. Two distinct mechanisms regulate the levels of a cellular tumor antigen, p53. Mol. Cell. Biol. 3: 2143-2150.
2. zur Hausen, H. and Schneider, A. 1987. The role of papillomaviruses in human angogenital cancer. In Howley, P.M. and Salzman, N.P., eds., The Papovaviradae, 2 Papillomaviruses. New York: Plenum, 245-263.
3. Munger, K., et al. 1989. Complex formation of human papillomavirus E7 proteins with the retinoblastoma tumor suppressor gene product. EMBO J. 8: 4099-4105.
4. Munger, K., et al. 1989. The E6 and E7 genes of the human papillomavirus type 16 together are necessary and sufficient for transformation of primary human keratinocytes. J. Virol. 63: 4417-4421.

SOURCE

HPV18 E7 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of HPV18 E7.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1590 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

HPV18 E7 (N-19) is recommended for detection of HPV18 E7 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).

Molecular Weight of HPV18 E7: 15 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

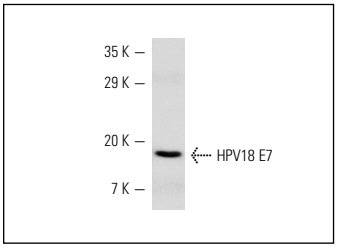
STORAGE

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.

DATA



HPV18 E7 (N-19): sc-1590. Western blot analysis of HPV18 E7 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Jones, D.L., et al. 1997. Analysis of the p53-mediated G_1 growth arrest pathway in cells expressing the human papillomavirus type 16 E7 oncoprotein. J. Virol. 71: 2905-2912.
2. De-Castro Arce, J., et al. 2007. Retinoic acid receptor β silences human papillomavirus-18 oncogene expression by induction of *de novo* methylation and heterochromatinization of the viral control region. J. Biol. Chem. 282: 28520-28529.
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5. Wang, W., et al. 2010. Selective targeting of HPV-16 E6/E7 in cervical cancer cells with a potent oncolytic adenovirus and its enhanced effect with radiotherapy *in vitro* and *vivo*. Cancer Lett. 291: 67-75.
6. Yaginuma, Y., et al. 2010. Characterization of physical binding between human papillomavirus 18 protein E7 and centromere protein C. Oncology 79: 219-228.
7. Darvas, K., et al. 2010. Histone deacetylase inhibitor-induced sensitization to TNFα/TRAIL-mediated apoptosis in cervical carcinoma cells is dependent on HPV oncogene expression. Int. J. Cancer 127: 1384-1392.
8. Banerjee, N.S., et al. 2011. Human papillomavirus (HPV) E7 induces prolonged G_2 following S phase reentry in differentiated human keratinocytes. J. Biol. Chem. 286: 15473-15482.