

# HPV16 E6/18 E6 (C1P5): sc-460

## 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 has 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 papilloma-viruses in human angongenital cancer. In Howley, P.M. and Salzman, N.P., eds., *The Papovaviridae, 2 Papillomaviruses*. New York: Plenum, 245-263.

## SOURCE

HPV16 E6/18 E6 (C1P5) is a mouse monoclonal antibody raised against purified HPV18 E6- $\beta$ -galactosidase fusion protein.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HPV16 E6/18 E6 (C1P5) is available conjugated to agarose (sc-460 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-460 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-460 PE), fluorescein (sc-460 FITC), Alexa Fluor<sup>®</sup> 488 (sc-460 AF488), Alexa Fluor<sup>®</sup> 546 (sc-460 AF546), Alexa Fluor<sup>®</sup> 594 (sc-460 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-460 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-460 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-460 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

HPV16 E6/18 E6 (C1P5) is recommended for detection of the early protein E6 of Human Papillomavirus (HPV) types 16 and 18 by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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 HPV16 E6/18 E6: 16/17 kDa.

Positive Controls: Ca Ski whole cell lysate: sc-364360 or HeLa whole cell lysate: sc-2200.

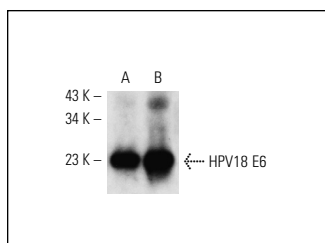
## STORAGE

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

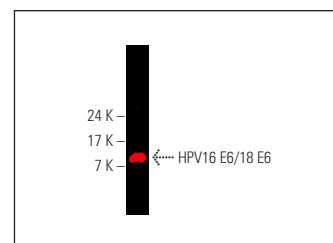
## RESEARCH USE

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

## DATA



Western blot analysis of HPV18 E6 expression in RKO E6 (A) and Ca Ski (B) whole cell lysates immunoprecipitated with HPV 16 E6/18 E6 (C1P5): sc-460 and detected with HPV18 E6 (C-17): sc-1585.



HPV16 E6/18 E6 (C1P5) Alexa Fluor<sup>®</sup> 790: sc-460 AF790. Direct near-infrared western blot analysis of HPV16 E6/18 E6 expression in HeLa whole cell lysate. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214.

## SELECT PRODUCT CITATIONS

1. Athanassiou, M., et al. 1999. Stabilization and reactivation of the p53 tumor suppressor protein in nontumorigenic revertants of HeLa cervical cancer cells. *Cell Growth Differ.* 10: 729-737.
2. Yew, C.W., et al. 2011. A novel MLL5 isoform that is essential to activate E6 and E7 transcription in HPV16/18-associated cervical cancers. *Cancer Res.* 71: 6696-6707.
3. Hsu, C.H., et al. 2012. The HPV E6 oncoprotein targets histone methyltransferases for modulating specific gene transcription. *Oncogene* 31: 2335-2349.
4. Roncaglia, M.T., et al. 2013. Characterization of p16 and E6 HPV-related proteins in uterine cervix high-grade lesions of patients treated by conization with large loop excision. *Oncol. Lett.* 6: 63-68.
5. Li, W. and Anderson, R.A. 2014. Star-PAP controls HPV E6 regulation of p53 and sensitizes cells to VP-16. *Oncogene* 33: 928-932.
6. Hu, Z., et al. 2015. TALEN-mediated targeting of HPV oncogenes ameliorates HPV-related cervical malignancy. *J. Clin. Invest.* 125: 425-436.
7. Sun, L., et al. 2016. Analysis of ROC: the value of HPV16 E6 protein in the diagnosis of early stage cervical carcinoma and precancerous lesions. *Oncol. Lett.* 12: 1769-1772.
8. Kim, S.H., et al. 2017. O-linked-N-acetylglucosamine transferase is associated with metastatic spread of human papillomavirus E6 and E7 oncoproteins to the lungs of mice. *Biochem. Biophys. Res. Commun.* 483: 793-802.
9. Eldakhkhny, S., et al. 2018. Human papillomavirus E7 induces p63 expression to modulate DNA damage response. *Cell Death Dis.* 9: 127.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

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