

HPV18 E6 (G-7): sc-365089

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

SOURCE

HPV18 E6 (G-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-31 at the N-terminus of HPV18 E6 of viral origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HPV18 E6 (G-7) is available conjugated to agarose (sc-365089 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365089 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365089 PE), fluorescein (sc-365089 FITC), Alexa Fluor[®] 488 (sc-365089 AF488), Alexa Fluor[®] 546 (sc-365089 AF546), Alexa Fluor[®] 594 (sc-365089 AF594) or Alexa Fluor[®] 647 (sc-365089 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365089 AF680) or Alexa Fluor[®] 790 (sc-365089 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-365089 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

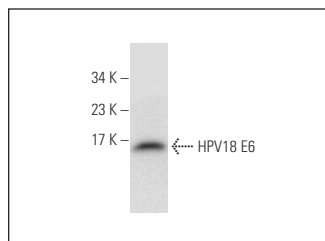
HPV18 E6 (G-7) is recommended for detection of HPV18 E6 by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of HPV18 E6: 16 kDa.

STORAGE

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

DATA



HPV18 E6 (G-7): sc-365089. Western blot analysis of HPV18 E6 expression in HeLa whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chuang, C.Y., et al. 2012. Differential impact of IL-10 expression on survival and relapse between HPV16-positive and -negative oral squamous cell carcinomas. *PLoS ONE* 7: e47541.
2. Sung, W.W., et al. 2013. IL-10 promotes tumor aggressiveness via upregulation of CIP2A transcription in lung adenocarcinoma. *Clin. Cancer Res.* 19: 4092-4103.
3. 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.
4. Paris, C., et al. 2015. CCCTC-binding factor recruitment to the early region of the human papillomavirus 18 genome regulates viral oncogene expression. *J. Virol.* 89: 4770-4785.
5. Karlsson, O.A., et al. 2015. Design of a PDZbody, a bivalent binder of the E6 protein from human papillomavirus. *Sci. Rep.* 5: 9382.
6. Jin, H., et al. 2016. Scaffold protein FHL2 facilitates MDM2-mediated degradation of IER3 to regulate proliferation of cervical cancer cells. *Oncogene* 35: 5106-5118.
7. Benatti, P., et al. 2016. NF-Y loss triggers p53 stabilization and apoptosis in HPV18-positive cells by affecting E6 transcription. *Oncotarget* 7: 45901-45915.
8. Rajasekaran, N., et al. 2017. Effect of HPV E6/E7 siRNA with chemotherapeutic agents on the regulation of TP53/E2F dynamic behavior for cell fate decisions. *Neoplasia* 19: 735-749.
9. Wasson, C.W., et al. 2017. Human papillomavirus type 18 E5 oncogene supports cell cycle progression and impairs epithelial differentiation by modulating growth factor receptor signalling during the virus life cycle. *Oncotarget* 8: 103581-103600.
10. Morgan, E.L., et al. 2018. STAT3 activation by E6 is essential for the differentiation-dependent HPV18 life cycle. *PLoS Pathog.* 14: e1006975.

RESEARCH USE

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