HPV Type 16 E7 Monoclonal Antibody (8C9)

Catalog Number 28-0006

Details
- **Size**: 50 µg
- **Host/Isotype**: Mouse / IgG1
- **Class**: Monoclonal
- **Type**: Antibody
- **Clone**: 8C9
- **Immunogen**: Bacterially derived fusion protein containing the human papillomavirus type 16 early protein E7 open reading frame.

Species Reactivity
- **Tested species reactivity**: Virus
- **Published species reactivity**: Rat, Virus, Human, Mouse, Not Applicable

Tested Applications
- **Immunohistochemistry (Paraffin) (IHC (P))**: 1:2
- **Immunoprecipitation (IP)**: 1:10
- **Western Blot (WB)**: 1:100

Published Applications
- **Western Blot (WB)**
- **Immunoprecipitation (IP)**
- **Immunofluorescence (IF)**
- **Immunocytochemistry (ICC)**
- **Miscellaneous PubMed (MISC)**

Species Reactivity
- **Tested species reactivity**: Virus
- **Published species reactivity**: Rat, Virus, Human, Mouse, Not Applicable

Toxicological Information

Product specific information

In Western blot against the HPV16-E7 bacterially derived fusion protein, the antibody detects a 52 kDa band which is composed of the HPV16-E7 protein (15 kDa) and the trpE protein (37 kDa). Positive reactivity for the 15 kDa HPV16-E7 expressed protein was shown with CaSki (HPV16 DNA-containing cell line) cells by Western blot. The antibody has also been shown to immunoprecipitate and immunocytochemically stain the HPV16-E7 expressed protein from the CaSki cell line. Negative reactivity by Western blot was shown with a series of other HPV fusion proteins including: HPV16-E2, HPV16-E4, HPV16-E6, HPV18-E7, HPV6-E7, HPV6-E4, and HPV6-L1. The antibody failed to react with HeLa (HPV18 DNA-containing cell line) cells and other HPV DNA negative cervical carcinoma cell lines, HT-3 and C-33A, by Western blot, by immunoprecipitation or by immunocytochemical staining analyses.

Reconstitute the lyophilized material with 1 mL of deionized or distilled water for a final concentration of 50 µg/mL.

Background/Target Information

The HPV E7 proteins are small (HPV16 E7 comprising 98 amino acids, 15kDa), zinc binding phosphoproteins which are localised in the nucleus. They are structurally and functionally similar to the E1A protein of subgenus C adenoviruses. The first 16 amino-terminal amino acids of HPV16 E7 contain a region homologous to a segment of the conserved region 1 (CR1) of the E1A protein of subgenus C adenoviruses. The next domain, up to amino acid 37, is homologous to the entire region 2 (CR2) of E1A. Genetic studies have established that these domains are required for cell transformation in vitro, suggesting similarities in the mechanism of transformation by these viruses. The CR2 homology region contains the LXCXE motif (residues 22-26) involved in binding to the tumour suppressor protein pRb.

### 7 Western Blot References

<table>
<thead>
<tr>
<th>Species / Dilution</th>
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<tbody>
<tr>
<td>Not Applicable / Not Cited</td>
<td>28-0006 was used in western blot to analyze the induction of tissue-specific cytokine polarization and cellular differentiation in HPV16-driven cervical tumorigenesis in vivo due to loss of keratin 17</td>
</tr>
</tbody>
</table>
| Human / 1:200 | Oncogene (Oct 2016; 35: 5653)  
"Loss of Keratin 17 induces tissue-specific cytokine polarization and cellular differentiation in HPV16-driven cervical tumorigenesis in vivo."  
Author(s): Hobbs RP, Bataazzi AS, Han MC, Coulombe PA  
PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.2016.0102 |
| Human / Not Cited | 28-0006 was used in western blot to study the interaction of human papillomaviruses E7 protein with B-Myb-MuvB complex and its effect on gene expression |
| Human / Not Cited | International journal of cancer (Jan 2013; 132: 335)  
"Successful therapeutic vaccination with integrase defective lentiviral vector expressing nononcogenic human papillomavirus E7 protein."  
Author(s): Grasso F, Negri DR, Mochi S, Rossi A, Cesolini A, Giovannelli A, Chiantore MV, Leone P, Giorgi C, Cara A  
PubMed Article URL:http://dx.doi.org/10.1002/ijc.27676 |
| Human / Not Cited | Journal of virology (Jun 2012; 86: 6358)  
"Reconstruction of human papillomavirus type 16-mediated early-stage neoplasia implicates E6/E7 deregulation and the loss of contact inhibition in neoplastic progression."  
Author(s): Isaacson Wechsler E, Wang Q, Roberts I, Pagliarulo E, Jackson D, Untersperger C, Coleman N, Griffin H, Doorbar J  
PubMed Article URL:http://dx.doi.org/10.1128/JVI.07069-11 |
| Mouse / 1:150 | "Two distinct activities contribute to human papillomavirus 16 E6's oncogenic potential."  
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PubMed Article URL:http://dx.doi.org/10.1158/0008-5472.CAN-05-1651 |
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"The HPV E7 oncoprotein inhibits tumor necrosis factor alpha-mediated apoptosis in normal human fibroblasts."  
Author(s): Thompson DA, Zaczyn V, Belinsky GS, Classon M, Jones DL, Schlegel R, Münger K  
PubMed Article URL:http://dx.doi.org/10.1038/sj.onc.1204483 |

### 2 Immunoprecipitation References

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</table>
| Not Applicable / Not Cited | Nature genetics (Aug 2015; 47: 933)  
"Keratin-dependent regulation of Aire and gene expression in skin keratinocytes."  
Author(s): Hobbs RP, DePianto DJ, Jacob JT, Han MC, Chung BM, Bataazzi AS, Polli BG, Guo Y, Han J, Ong S, Zheng W, Taube JM, Ihaková D, Wan F, Coulombe PA  
PubMed Article URL:http://dx.doi.org/10.1038/ng.3355 |
| Human / Not Cited | 28-0006 was used in immunoprecipitation and western blot to report that autoimmune regulator is induced in human and mouse tumor keratinocytes in a K17-dependent manner and results in Gli2-induced skin tumorigenesis in mice |
Author(s): Thompson DA, Zaczyn V, Belinsky GS, Classon M, Jones DL, Schlegel R, Münger K  
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### 5 Immunofluorescence References

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Author(s): Dichamp I, Sélité P, Agius G, Barbarin A, Béby-Defaux A  
PubMed Article URL:http://dx.doi.org/10.1371/journal.pone.0096136 |
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<tr>
<td>Human / Not Cited</td>
<td>&quot;The role of apoptosis in creating and maintaining luminal space within normal and oncogene-expressing mammary acini.&quot; Author(s): Debnath J, Mills KR, Collins NL, Reginato MJ, Muthuswamy SK, Brugge JS PubMed Article URL:<a href="http://dx.doi.org/null">http://dx.doi.org/null</a></td>
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<td>Human / Not Cited</td>
<td>Cell growth and differentiation : the molecular biology journal of the American Association for Cancer Research (May 2001; 12; 233)</td>
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<td>Human / Not Cited</td>
<td>&quot;Localisation of human papillomavirus 16 E7 oncoprotein changes with cell confluence.&quot; Author(s): Laursen J, Rai K PubMed Article URL:<a href="http://dx.doi.org/10.1371/journal.pone.0021501">http://dx.doi.org/10.1371/journal.pone.0021501</a></td>
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### Immunocytochemistry References

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<td>Virus / Not Cited</td>
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### Miscellaneous PubMed References

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