

## Protein E7, HPV (N-His, C-His)

Cat. No.:	HY-P700389
Synonyms:	Protein E7
Species:	Virus
Source:	E. coli
Accession:	P03129 (M1-P98)
Gene ID:	1489079
Molecular Weight:	16.3 kDa

### PROPERTIES

AA Sequence	M H G D T P T L H E      Y M L D L Q P E T T      D L Y C Y E Q L N D      S S E E E D E I D G P A G Q A E P D R A      H Y N I V T F C C K      C D S T L R L C V Q      S T H V D I R T L E D L L M G T L G I V      C P I C S Q K P
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of 20 mM Tris-HCl, 0.5 M NaCl, 6% Trehalose, pH 8.0
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	<p>The Protein E7 from Human Papillomavirus (HPV) plays a crucial role in viral genome replication by inducing quiescent cells to enter the cell cycle, facilitating the efficient utilization of the cellular DNA replicating machinery for viral genome replication. E7 exhibits both transforming and trans-activating activities, disrupting the RB1-E2F1 complex and activating E2F1-regulated S-phase genes. It interferes with host histone deacetylation mediated by HDAC1 and HDAC2, resulting in transcriptional activation. Additionally, E7 inhibits the antiviral and antiproliferative functions of host interferon alpha. Its interaction with host TMEM173/STING hinders the ability of TMEM173/STING to sense cytosolic DNA and promote type I interferon production. E7 forms homodimers and homoooligomers, interacts with host RB1 to disrupt RB1 activity, and associates with EP300 to repress EP300 transcriptional activity. Complex formation with CHD4 and HDAC1 alters host histone deacetylation, while the interaction with protein E2 inhibits E7 oncogenic activity. The multifaceted actions of Protein E7 underscore its pivotal role in HPV-associated cellular processes and its intricate modulation of host cell</p>
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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