

Protein E7, HPV (His)

Cat. No.:	HY-P72259
Synonyms:	E7; Protein E7
Species:	Virus
Source:	E. coli
Accession:	P03129 (M1-P98)
Gene ID:	1489079
Molecular Weight:	Approximately 21 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
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Protein E7 at 10 µg/mL (100 µL/well) can bind Biotinylated MYC. The ED ₅₀ for this effect is 0.2398 µg/mL, corresponding to a specific activity is 4.17×10 ³ Unit/mg.
Appearance	Lyophilized powder
Formulation	Lyophilized from 0.2 µm filtered solution in 20 mM Tris-HCL, 0.5 M NaCl, 6% Trehalose, pH 8.0 or 50 mM Tris-HCL, 300 mM NaCl, pH 7.4 or PBS, 6% Trehalose, pH 7.4.
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 ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	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 homooligomers, 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 functions.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA