

HPV16E7 protein (Human papillomavirus type 16 E7 protein), lyophilized Catalog #2702 Lot Z0312

Limitation on use:

THIS PRODUCT IS FOR RESEARCH USE ONLY (RUO) AND IS NOT APPROVED FOR THERAPEUTIC OR DIAGNOSTIC USE. IN ALL CIRCUMSTANCES, THE USER MUST VALIDATE THE PRODUCT FOR SUITABILITY OF THEIR INTENDED PURPOSE.

Precautions:

All research reagents can be considered as being potentially hazardous. We therefore recommend that this product be handled only by qualified laboratory personnel who have been trained in laboratory techniques and that it is used in accordance with the principles of good laboratory practice. Wear suitable protective clothing, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In the case of contact with skin or eyes, wash immediately.

Background:

Human papillomavirus (HPV) types 16 and 18 are frequently associated with human cervical cancer. The E7 proteins has a critical function in cell tumor transformation. The HPV16E7 protein is composed of 98 amino acids and is divided into three conserved regions, CR1, CR2, and CR3. A small portion of CR1 and nearly entire CR2 has sequence similarity with adenovirus (Ad) E1A proteins and large T antigen of SV40. The CR3 region encodes a zinc finger domain containing two CXXC motifs, and is responsible for zinc-dependent dimerization. It mediates E7 interaction with p21 and pRB, cellular proteins responsible for cell cycle regulation and apoptosis.

Description:

HPV16E7 protein, Cat. #2702, is highly purified full-length (98aa) HPV16E7 protein, expressed in *E. coli*. The purified protein has an N-term 6x his-tag.

Supplied As:

100µg of HPV16E7 protein, lyophilized. When reconstituted with 100µL H₂O, concentration will be 1 mg/mL (see below for reconstitution instructions).

Purity:

Purity >95% by SDS-PAGE (see figure).

Reconstitution/Storage:

Spin tube in a microfuge for 10 sec to consolidate lyophilized material. Carefully open the vial and add 100µL dH₂O. Vortex gently for 10 sec (avoid air bubbles), then spin tube again. Let stand for 5 min. Carefully triturate the sample 5-times using a pipetteman (avoid air bubbles). Spin tube briefly in microfuge to consolidate. Upon reconstitution with 100µL dH₂O, the final concentrations are as follows: 1mg/mL HPV16E7 protein, 40mM HEPES, pH7.4, 150mM NaCl, 0.5mM EDTA, 0.5mM TCEP, 0.02%

sodium azide, and 1.7% trehalose (lyophilization stabilizer). Store reconstituted HPV16E7 protein at -70°C. Avoid freeze/thaw cycles. *NOTE: It is recommended to aliquot the reconstituted protein into multiple tubes (PCR tubes) and freeze/store at -70°C.*

Storage and Stability:

Stable for >6 months from date of shipment when stored desiccated at 4°C, or more stable at -70°C.

Applications and Suggested Dilutions:

ELISA and other immunoassays
Western Blot, 100 ng/well using HRP/TMB; <20 ng/well for ECL.

Original Reference:

This product was developed at Tulip Biolabs, Inc.

Useful References:

Int. J. Mol. Sci. **2021**, 22(3), 1400;
doi.org/10.3390/ijms22031400

Tulip BioLabs Other Related Products:

Cat. #2702/S HPV16E7 protein, solution

Cat. #2704/S HPV18E7 protein, solution

Cat. #2704 HPV18E7 protein, lyophilized

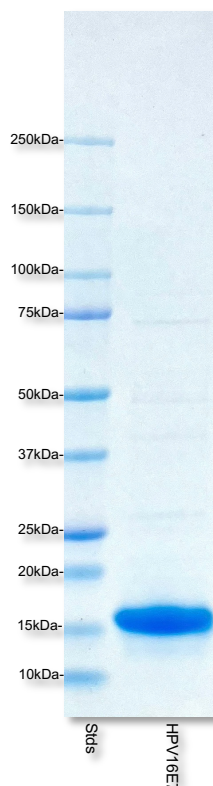


Figure. Purity of HPV16E7 by SDS-PAGE. The purity of HPV16E7 Cat. #2702 was analyzed by SDS-PAGE/Coomassie blue staining (9µg protein load). Estimated purity is >95%.