**BACKGROUND**

Human papillomaviruses, particularly type 16 (designated HPV16), infect the genital tract and may lead to cervical cancer. Protection against HPV16 is thought to be provided by neutralizing antibodies directed to the major capsid protein L1 of HPV16. HPV16 L1 forms the pentameric assembly unit of the viral shell, and the binding of HPV16 L1 to the cell surface without the involvement of minor capsid protein L2 is believed to be the first step of HPV16 infection. The L1-binding domain located near the C-terminus of L2 binds L1 prior to completion of capsid assembly and is required for efficient encapsidation of the viral genome. In addition, the C-terminus of L1 is necessary for both DNA binding and DNA packaging. Expression of the late gene L1 is restricted to the upper layers of the infected epithelium. HPV16 L1 is able to package unrelated plasmid DNA in vitro and deliver the foreign DNA to eukaryotic cells with the subsequent expression of the encoded gene. L1 shows a diffuse nuclear distribution whereas L2 is localized to punctate nuclear regions identified as prononcocytoplasmic granule oncogenic domains (PODs). Coexpression of L1 and L2 induces a relocalization of L1 into the PODs.

**REFERENCES**


**APPLICATIONS**

HPV16 L1 (289-16981) is recommended for detection of HPV16 L1 by Western Blotting (starting dilution 1:200, 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

**Molecular Weight of HPV16 L1**: 55 kDa.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:


**SELECT PRODUCT CITATIONS**


**STORAGE**

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

**RESEARCH USE**

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

**SOURCE**

HPV16 L1 (289-16981) is a mouse monoclonal antibody raised against HPV16 L1 fusion protein.

**PRODUCT**

Each vial contains 200 µg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**CONJUGATES**

See HPV16 L1 (CAMVIR-1): sc-47699 for HPV16 L1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.