**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 podosome-like structures (PODs). Coexpression of L1 and L2 induces a relocalization of L1 into the PODs.

**REFERENCES**


**PRODUCT**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

HPV16 L1 (MD2H11) is available conjugated to agarose (sc-65713 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-65713 HRP), 200 µg/ml, for WB, IF, IHC(P) and ELISA; to either phycoerythrin (sc-65713 PE), fluorescein (sc-65713 FITC), Alexa Fluor® 488 (sc-65713 AF488), Alexa Fluor® 546 (sc-65713 AF546), Alexa Fluor® 594 (sc-65713 AF594) or Alexa Fluor® 647 (sc-65713 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-65713 AF680) or Alexa Fluor® 790 (sc-65713 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**APPLICATIONS**

HPV16 L1 (MD2H11) is recommended for detection of HPV16 L1 of HPV16 origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); may cross-react with HPV11 L1 and HPV18 L2.

**RECOMMENDED SUPPORT REAGENTS**

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

1) Western Blotting: use m-IgG BP-HRP: sc-516102 or m-IgG BP-HRP (Cruz Marker); sc-516102-CM (dilution range 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG BP-PE: sc-516141 (dilution range 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

**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.

**SOURCE**

HPV16 L1 (MD2H11) is a mouse monoclonal antibody raised against HPV16 L1.

**RESEARCH USE**

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