

Product Specification Sheet

Human Papillomavirus Type 16 capsid L1 (HPV16 L1) protein Antibodies

Cat # HPV16L11-M	Mouse Monoclonal Anti-HPV16L1 IgG	SIZE: 100 ul
Cat # HPV16L11-C	Recombinant purified HPV16L1 protein control for WB	SIZE: 100 ul

Human papillomavirus (HPV) is a virus from the papillomavirus family of viruses that is capable of infecting humans. Like all papillomaviruses, HPVs establish productive infections only in keratinocytes of the skin or mucous membranes. While the majority of the nearly 200 known types of HPV cause no symptoms in most people, some types can cause warts (verrucae), while others can lead to cancers of the cervix, vulva, vagina, and anus in women or cancers of the anus and penis in men. HPV infection is a cause of nearly all cases of cervical cancer. Over 120 HPV types have been identified and are referred to by number. Types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, and 59 are "high-risk" sexually transmitted HPVs. Two vaccines are available to prevent infection by some HPV types: **Gardasil**, marketed by Merck, and **Cervarix**, marketed by GlaxoSmithKline. Both vaccines utilize recombinant L1 proteins and protect against initial infection with HPV types 16 and 18, which cause most of the HPV associated cancer cases. Gardasil also protects against HPV types 6 and 11, which cause 90% of genital warts.

The HPV genome (dsDNA of ~8000 base pairs) is composed of six early (E1, E2, E3, E4, E6, and E7) and two late (L1 and L2) proteins. After the host cell is infected E1 and E2 are expressed first. In the upper layers of the host epithelium, the late genes L1 and L2 are transcribed/translated and serve as structural proteins that encapsidate the amplified viral genomes. The papillomavirus capsid also contains a viral protein known as L2, which is less abundant. L2 is of interest as a possible target for more broadly protective HPV vaccines.

HPV 6 L1 (protein accession #AAC53712, 501-aa), HPV11 L1 (protein accession #CCB84764, 503-aa) HPV16 L1 (protein accession #ACA14209; 531aa/505-aa), HPV18 L1 (protein accession #AAP20601; 568-aa/427-aa),

Source of Peptide Antigen and Antibodies

Antigen	Recombinant HPV16L1 protein
Ab Host/type	Mouse, Monoclonal, ascites, IgG1k, (cat # HPV16L11-M) in PBS, pH 7.5 containing 0.1% BSA and 0.05% azide, concn is ~1 mg/ml.
2-ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Recombinant (E.coli) HPV16L1 protein (full length; gene accession # P03101) was expressed as fusion protein (HPV16-His tag-) in E.coli and purified (>95% with major band at ~60 kDa). For Western blot +ve control (**Cat # HPV16L11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of HPV16L11-C for good visibility with antibody Cat # **HPV16L11-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated

once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the HPV16L11-C solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Purified IgG (unpurified, undiluted)

100 ul/vial
solution lyophilized powder
contains 0.05% sodium azide
Reconstitute powder in the original vol. of water

Storage

Short-term: unopened, undiluted vials for less than a week at 4oC.

Long-term: at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20oC or below.

Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting. Purified antibody should be tested 1:200-1:2000 dilution for Western. It is suggested that user optimize actual dilution and conditions according their application. The antibody recognizes 60 kDa recombinant HPV16L1 protein in Western blots.

ELISA: Control protein should be coated at 1-10 ug/ml.

Immunocytochemistry. Not tested. We recommend the use of affinity pure antibody to reduce background (use at 5-10 ug/ml).

Antibody specificity Cross-reactivity

Antibody recognized HPV16L1 major capsid protein. Antibody cross react with HPV16L1s from other types has not been established. Antibody crossreactivity in various other species is not established. Purified recombinant HPV16L1 protein is available for control studies.

General References: Neepier MP (1996) Gene 180, 1-6; Narechania A (2005) J. Virol. 79, 15503-15510

For In Vitro Research Use and Manufacturing Only.

Related material available from ADI
HPV6, 11, 16, 18 E1-E6, L1, L2 Proteins, antibodies, and ELISA kits

HPV16L11-M 120228A

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