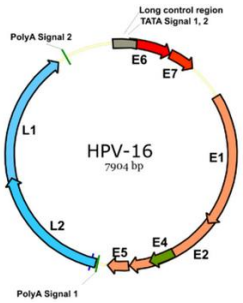
ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Monoclonal Anti-Human Papilloma Virus 18 (HPV18) early protein E7 (HPV18E7) IgG

Cat # HPV18E71-M Monoclonal Anti-HPV18 early protein E7 (HPV18E7) IgG, aff pure #1 **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. Encodes a protein that binds to the viral origin of replication in the long control region of the viral genome. E1 uses ATP to exert a helicase activity that forces apart the DNA strands, thus preparing the viral genome for replication by cellular DNA replication factors. After the host cell is infected E1 and E2 are expressed first. In most papillomavirus types, the primary function of the E7 protein is to inactivate members of the pRb family of tumor suppressor proteins. Together with E6, E7 serves to prevent cell death (apoptosis) and promote cell cycle progression, thus priming the cell for replication of the viral DNA. E7 also participates in immortalization of infected cells by activating cellular telomerase. As with E6, the ongoing expression of E7 is required for survival of cancer cell lines, such as HeLa, that are derived from HPV-induced tumors. 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.

Source of Peptide Antigen and Antibodies

Antigen	HPV 18 Oncoprotein E7, Type 18, recombinant
Ab Host/type	Mouse, monoclonal, antiserum (**cat # HPV18E71-M**) in PBS, pH 7.5 containing 0.05% azide; isotype IgG2a. **Reconstitute powder** in 100 ul water or PBS. Store frozen at -20oC or below.
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

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

ELISA: Test 1:100-1:1000 diluted controls using Recombinant HPV18E7 protein coated plates.
Western: use at 1:200-1:1000 dilution

Antibody specificity Cross-reactivity

Reacts with the monomer and dimer forms when tested in Western Blot. The antibody does not cross-react with E7 protein of HPV type 16. Purified recombinant HPV18E7 proteins can also be used as positive controls.

General References: Neeper 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

HPV06L15-R-10 Recombinant (E.coli) Human Papilloma Virus 06 late protein L1 (HPV6L1), full length, His-tag

HPV11L15-R-10 Recombinant (E.coli) Human Papilloma Virus 11 late protein L1 (HPV11L1), full length, His-tag

HPV16L15-R-10 Recombinant (E.coli) Human Papilloma Virus 16 (HPV16) late protein L1 protein (his-tag), full length,

HPV18L15-R-10 Recombinant (E.coli) Human Papilloma Virus 18 (HPV18) late protein L1, full length, His-tag

550-206-PRG Rabbit Anti-Human Papilloma Virus 6 late protein L1 (HPV6L1) IgG ELISA kit, quantitative, 96 tests 1 Kit
550-211-PRG Rabbit Anti-Human Papilloma Virus 11 late protein L1 (HPV11L1) IgG ELISA kit, quantitative, 96 tests 1 Kit
550-216-PRG Rabbit Anti-Human Papilloma Virus 16 late protein L1 (HPV16L1) IgG ELISA kit, quantitative, 96 tests 1 Kit
550-218-PRG Rabbit Anti-Human Papilloma Virus 18 late protein L1 (HPV18L1) IgG ELISA kit, quantitative, 96 tests 1 Kit

HPV18E71-M 130916A

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