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Product Information

Human immunodeficiency virus type-1 virus-like particles(HIV-1 VLPs)

Cat. No.: **VLP-038YF**
This product is for research use only and is not intended for diagnostic use.

Recombinant Human immunodeficiency virus type-1 virus-like particles(HIV-1 VLPs) are produced in HEK293 expression system, assembled with Gag protein. VLP is mimicking the native 3D structure of viruses which can elicit strong immune responses. However, VLPs lack viral genomic material which makes them non-infectious, unable to replicate and enhance the safety during manufacture and administration. HIV-1 VLPs can be used in the development of HIV-1 diagnostics and in vaccine development and R&D (including use as an immunogen).

Product Specifications

Structural Proteins

Gag protein

Expression Systems

HEK293 (please specify if other expression system is needed)

Form

Liquid

Alternative Names

Human immunodeficiency virus type-1 virus-like particles, Human immunodeficiency virus type-1 VLPs, HIV-1 VLPs, HIV-1 virus-like particles, virus-like particles, VLPs

Storage

Store at -80°C long term. Avoid repeated freeze/thaw cycles.

Virus Background

Virus Family

Retroviridae

Virus Species

Lentivirus

Virus Overview

The human immunodeficiency viruses (HIV) are two species of Lentivirus that infect humans. Over time, they cause acquired immunodeficiency syndrome (AIDS), a condition in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive.HIV is different in structure from other retroviruses. It is roughly spherical with a diameter of about 120 nm, around 60 times smaller than a red blood cell. It is composed of two copies of positive-sense single-stranded RNA that codes for the virus's nine genes enclosed by a conical capsid composed of 2,000 copies of the viral protein p24. The single-stranded RNA is tightly bound to nucleocapsid proteins, p7, and enzymes needed for the development of the virion such as reverse transcriptase, proteases, ribonuclease and integrase.

A matrix composed of the viral protein p17 surrounds the capsid ensuring the integrity of the virion particle.

Virus Structure

Enveloped, positive-sense single-stranded RNA virus

Related Disease

AIDS

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