

## HIV Type-O Envelope

**Description:** HIV type-O Envelope recombinant having a Mw of 2.6kda containing the HIV type-O transmembrane envelope-derived specific sequence. Detects all clades of HIV-type O infected individuals responding to HIV-type O envelope proteins. Detects HIV-type O infected individuals responding to HIV envelope antibodies.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile filtered colorless clear solution.

**Purity:** Greater than 95.0% as determined by HPLC analysis and SDS-PAGE.

**Specificity:**

Immunoreactive with all sera of HIV type-O infected individuals.

**Formulation:**

1 mg/ml in 50mM Tris-HCl pH 6.2.

**Stability:**

HIV type-O although stable at 4°C for 1 week, should be stored below -18°C. Please prevent freeze thaw cycles.

**Usage:**

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

**Applications:**

HIV type-O antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.

**Introduction:**

Human immunodeficiency virus (HIV) is a retrovirus that can lead to a condition in which the immune system begins to fail, leading to opportunistic infections. HIV primarily infects vital cells in the human immune system such as helper T cells (specifically CD4+ T cells), macrophages and dendritic cells. HIV infection leads to low levels of CD4+ T cells through three main mechanisms: firstly, direct viral killing of infected cells; secondly, increased rates of apoptosis in infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytes that recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunity is lost, and the body becomes progressively more susceptible to opportunistic infections. HIV was classified as a member of the genus *Lentivirus*, part of the family of *Retroviridae*. Lentiviruses have many common morphologies and biological properties. Many species are infected by lentiviruses, which are characteristically responsible for long-duration illnesses with a long incubation period. Lentiviruses are transmitted as single-stranded, positive-sense, enveloped RNA viruses. Upon entry of the target cell, the viral RNA genome is converted to double-stranded DNA by a virally encoded reverse transcriptase that is present in the virus particle. This viral DNA is then integrated into the cellular DNA by a virally encoded integrase so that the genome can be transcribed. Once the virus has infected the cell, two pathways are possible: either the virus becomes latent and the infected cell continues to function, or the virus becomes active and replicates, and a large number of virus particles are liberated that can then infect other cells.

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