RayBiotech, Inc.

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Certificate of Analysis and Data Sheet

Recombinant HIV-1 gag p17, p24

Catalog No.	**Source:**
228-10735	*E. Coli*

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 latentand 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.

Description:

HIV-1 p17, p24 is a non-glycosylated polypeptide chain, containing sequence of HIV-1 immunodominant regions p17-p24. The protein is fused to a GST tag at N-terminus.

Physical Appearance:

Sterile filtered colorless clear solution.

Formulation:

1.5 M urea, 25mM Tris-HCl pH 8.0, 0.2% Triton-X & 50% Glycerol.

Stability:

HIV-1 gag p17, p24 Protein is shipped at ambient temperature. Upon arrival, Store at -20°C Stable for Five years frozen. One month in solution at room temperature.

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Specificity

Immunoreactive with all sera of HIV-1 infected individuals.

Applications

HIV-1 gag p17, p24 antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.

Purity

Greater than 95.0% as determined by SDS-PAGE.