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SCIENTIFIC

HIV-1 p24 gag

Description:The E.coli derived 39 kDa recombinant protein is a non-glycosylated polypeptide chain, containing the HIV-1 p24 gag immunodominant regions, 77-436 amino acids.The HIV-1 p24 gag is fused to beta-galactosidase (114 kDa).

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless clear solution.

Amino Acid Sequence:slyn tvatlycvhq rieikdtkea ldkikeeqnk skkkaqqaaa dtghssqvsq nypivqniqg qmvhqaispr tlnawvkvve ekafspevip mfsalsegat pqdlntmlnt vgghqaamqm lketineeaa ewdrvhpvha gpiapgqmre prgsdiagtt stlqeqigwm tnnppipvge iykrwiilgl nkivrmyspt sildirqgpk epfrdyvdrf yktlraeq

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

Specificty:

Immunoreactive with all sera of HIV-1 infected individuals.

Formulation:

8M urea, 20mM Tris-HCl pH-8 & 10mM -mercaptoethanol.

Stability:

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

Introduction:

Human immunodeficiency virus (HIV) is a retrovirusthat can lead to a condition in which the immune systembegins to fail, leading to opportunistic infections. HIV primarily infects vital cells in the humanimmune systemsuch as helper T cells(specifically CD4+ T cells), macrophagesand 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 apoptosisin infected cells; and thirdly, killing of infected CD4+ T cells by CD8 cytotoxic lymphocytesthat recognize infected cells. When CD4+ T cell numbers decline below a critical level, cell-mediated immunityis 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 genomeis converted to double-stranded DNAby a virally encoded reverse transcriptasethat is present in the virus particle. This viral DNA is then integrated into the cellular DNA by a virally encoded integrases that the genome can be transcribed. Once







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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.

Catalog #:HIPS-130

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