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Antibody to HIV-1 gp120
MOUSE MONOCLONAL

Catalog Number: PRP-151ANT
Quantity: 500 micrograms, 1 milligram
Format: Lyophilized
Host: Mouse
Isotype: IgG1
Clone: NYRHIV1gp120
Immunogen: r.gp120 (MN strain)

Background:

Human immunodeficiency virus (HIV) is a retrovirus that can cause 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 is 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.

Specificity and Preparation:

The monoclonal antibody to HIV-1 gp120 (PNDmn) was purified by ion exchange column. The protein concentration is 1 mg/ml in PBS (after reconstitution).

Usage and Storage:

Reported to be effective for binding and neutralization (tested in cell culture) and ELISA (against recombinant gp120, 1:20,000 dilution will yield 0.5 O.D. units with an alkaline phosphatase conjugated rabbit anti-mouse secondary antibody).
Material may be shipped at room temperature. Store lyophilized material at 4°C in dry environment. Reconstitute with H₂O. Gently spin down material before use; 5-10 seconds in a microfuge should be adequate. Once reconstituted, aliquot and store at -20°C. Material is stable for two years lyophilized, one month in solution at 4°C.

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