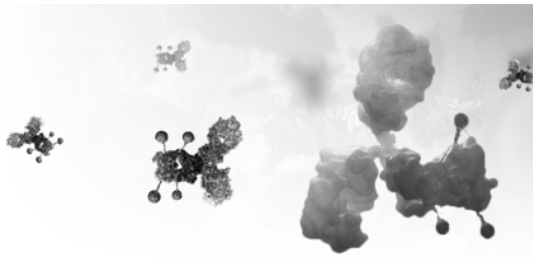

Recombinant HIV type 1 P55 Protein (DAG1532)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Product Overview	HIV-1 p55 Recombinant- is a 55kDa protein derived from gag gene of an HTLV-3/LAV isolate of HIV-1. The HIV-1 p55 is glycosylated with N-linked sugars and produced using baculovirus vectors in insect cells. The full length authmentic p55 gag protein forms
Antigen Description	HIV1 (gag) p55 is a precursor protein of several proteins that form the core structure of AIDS virus, indispensable to its reproduction. This protein is digested by HIV1 protease, first into intermediate products p41 and p15. Then p41 is digested into matrix protein p17 and capsid protein p24. Protein p15 is further digested into nucleocapsid protein p7 and to p6 and p1; of unknown function. Nine genes are encoded within the HIV1 RNA genome. Three of these genes, gag, pol, and env, contain information needed to make the structural proteins for new virus particles.
Species	HIV
Purity	Greater than 90.0% as determined by HPLC analysis and SDS-PAGE.
Conjugate	Unconjugated
Applications	HIV-1 p55 gag antigen is suitable for ELISA and Western blots, excellent antigen for early detection of HIV seroconvertors with minimal specificity problems.
Format	Sterile filtered colorless clear solution.
Size	10 µg, 100 µg
Buffer	10mM Tris pH 8, 140mM NaCl and 400mM L-Arginine.
Preservative	None
Storage	2-8°C short term, -20°C long term

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BACKGROUND

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 integraseso 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.
Keywords	CA; Gag; Gag polyprotein; HIV1 Pr55Gag; Human immunodeficiency virus 1 p55; MA; Matrix protein; Pr55; Pr55Gag; HIV-1 P55; HIV-1 Gag p55

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