

Human CellExp™ HIV-1 (CN54) GP120

CATALOG CAT.: P1003-20 20 µg
P1003-100 100 µg

SYNONYMS: GP120, GP120-CN54

SOURCE: Recombinant HIV-1 GP120 Protein (HIV-1 /Clade B/C (CN54)) derived from HIV-1 strain CN54 gp160 (Thr27 – Arg 498) and glycosylated with N-linked sugars and expressed in HEK293 cells

PURITY: >97% by SDS-PAGE.

MOL. WEIGHT: This protein is fused with polyhistidine tag at the C-terminus, has a predicted MW of 53.8 kDa. The protein migrates to 80-110 kDa due to glycosylation.

ENDOTOXIN LEVEL: 1.0 EU per µg of the protein by the LAL method.

FORM: Lyophilized

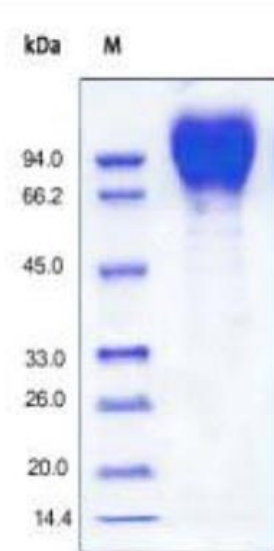
FORMULATION: Lyophilized from 0.22 µm filtered solution in PBS, pH 7.4. Normally Mannitol or Trehalose are added as protectants before lyophilization.

STORAGE CONDITIONS: Store at -20°C for long term storage. After reconstitution, aliquot and store at -70°C for up to 3 months. Avoid repeated freezing and thawing cycles.

RECONSTITUTION: Centrifuge the vial prior to opening. Reconstitute in sterile PBS (pH7.4) to a stock solution of 100 µg/ml. Solubilize for 30 to 60 minutes at room temperature with occasional gentle mixing. Carrier protein (0.1% (W/V) HSA or BSA) is recommended for further dilution and long term storage.

DESCRIPTION: Human Immunodeficiency Virus (HIV) can be divided into two major types, HIV type 1 (HIV-1) and HIV type 2 (HIV-2). HIV-1 is related to viruses found in chimpanzees and gorillas living in western Africa. HIV-2 is related to viruses found in sooty mangabeys. HIV-1 viruses may be further divided into groups. The HIV-1 group M viruses predominate and are responsible for the AIDS pandemic. Some of the HIV-1 group M subtypes are known to be more virulent or are resistant to different medications. Envelope glycoprotein GP120 (or gp120) is the name of the glycoprotein which forms the spikes sticking out of a HIV virus particle. Gp120 is essential for virus entry into cells as it plays a

heterodimers to a transmembrane glycoprotein, gp41, are thought to combine in a trimer to form the envelope spike, which is involved in virus-cell attachment. One half of the molecular weight of gp120 is due to the carbohydrate side chains (the "glyco-" in "glycoprotein"). These are sugar residues which form something almost like a sugar "dome" over the gp120 spikes. This dome prevents gp120 from being recognized by the human immune response. As the HIV virus and the human CD4 cell come together, the gp120 binding site "snaps open" at the last minute. The glycoprotein gp120 is anchored to the viral membrane, or envelope, via non-covalent bonds with the transmembrane glycoprotein, gp41. It is involved in entry into cells by binding to CD4 receptors, particularly helper T-cells. Binding to CD4 is mainly electrostatic although there are van der Waals interactions and hydrogen bonds.



The purity of HIV-1 (CN54) GP120 was determined by DTT-reduced (+) SDS-PAGE and staining overnight with Coomassie Blue.

RELATED PRODUCTS:

- HIV-1 Protease Activity Assay Kit (Fluorometric) (Cat. K825-100)
- Active HIV1 Protease Recombinant (GST-tagged) (Cat. 7849-20, -100)
- HIV-2 Protease Activity Assay Kit (Fluorometric) (Cat. K845-100)
- Active HIV-2 Protease Recombinant (GST-tagged) (Cat. 7851-20, -100)

FOR RESEARCH USE ONLY! Not to be used in humans.

