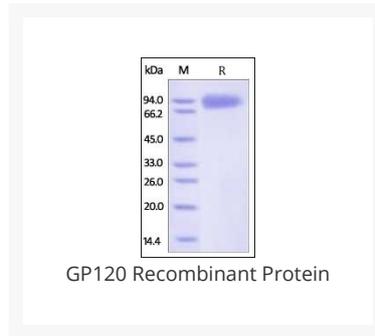




GP120 Recombinant Protein

Cat. No.: 96-365



Ψ Specifications

SPECIES:	HIV-1
SOURCE SPECIES:	HEK293 cells
SEQUENCE:	Thr 36 - Lys 511
FUSION TAG:	His Tag
TESTED APPLICATIONS:	WB
APPLICATIONS:	This recombinant protein can be used for WB. For research use only.
PREDICTED MOLECULAR WEIGHT:	54.1 kDa

Ψ Properties

PURITY:	>95% as determined by SDS-PAGE.
PHYSICAL STATE:	Lyophilized
BUFFER:	PBS, pH7.4
STORAGE CONDITIONS:	Lyophilized Protein should be stored at -20 °C or lower for long term storage. Upon reconstitution, working aliquots should be stored at -20 °C or -70 °C. Avoid repeated freeze-thaw cycles.

ALTERNATE NAMES:	GP120, GP120-CM244
ACCESSION NO.:	Q4QX31

Background and References

BACKGROUND:	<p>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. HIV-2 viruses are thought to be less virulent and transmissible than HIV-1 M group viruses. 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 vital role in seeking out specific cell surface receptors for entry. Three gp120s, bound as 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 recognised 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.</p>
REFERENCES:	<p>1) Zhu P, et al., 2008, PLoS Pathog. 4 (11): e1000203.</p> <p>2) Wood, N., et al., PLOS Pathogens 5: 1-16.</p> <p>3) Kwong PD, et al., 1998, NATURE 393 (6686): 648-659.</p>

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