

## gp140 (HIV-1/Clade B)

CATALOG NUMBER: IV-gp140-B21t, 50 µg, 1mg

### Introduction

The exposed trimeric envelope glycoproteins of HIV target viral entry by melding the membranes of host cells with the virus. It consists of a structure of heterodimers of the transmembrane glycoprotein (gp41) and a surface glycoprotein (gp120) which are both derived by proteolytic cleavage from their common gp160 precursor. The gp140 ectodomain of envelope glycoprotein is a heterodimer with mass of approximately 140 kDa, composed of the entire gp120 component, and approximately 20 kDa of gp41. This ectodomain is essential for viral entry into cells as it plays a vital role in attachment to specific cell surface receptors. These receptors are DC-SIGN, Heparan Sulfate Proteoglycan and a specific interaction with the CD4 receptor, particularly on helper T-cells. Binding to CD4 induces the start of a cascade of conformational changes in GP120 and gp41 that lead to the fusion of the viral with the host cell membrane. Binding to CD4 is mainly electrostatic although there are van der Waals interactions and hydrogen bonds.

### Applications

Western blot standard, antibody ELISA, HIV-1 entry inhibition, *etc.*

### Description

Recombinant gp140 protein expressed and purified from HEK293 cells

### Viral Protein

Full length HIV-1 gp140 (Clade B) protein (amino acid 23-680) with a C-terminal foldon-6xhis tag (GenBank No. M63929). A linker sequence (SGGGSGGGSGGGG) has been introduced between gp120 and gp41. The majority of protein exists as trimer.

### Storage

Store at -20 °C; Stable for 6-months from the date of shipment when kept at 4 °C.

### Concentration

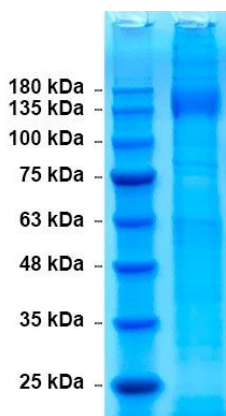
1 mg/ml in PBS

### Endotoxin Level

<0.1 EU per 1 µg of the protein by LAL test

### Purity

≥ 95% purity (SDS PAGE)



**SDS-PAGE:** Purified recombinant HIV-1 gp140 (Clade B) protein