



Immune Technology Corp.

The Resource for Virology Research

HIV-1 gp120 Clade B ELISA Development Kit Catalog Number: IT-E3Ag-HIVgp120B

Description: HIV-1 gp120 Clade B ELISA Development Kit contains the key components required for the quantitative analysis of gp120 (HIV-1/Clade B) concentrations in cell culture supernatants and serum within the range of 0.316-316ng/ml in a sandwich ELISA format. The components supplied in this kit are sufficient to assay HIV-1 gp120 (Clade B) in five 96-well ELISA plates.

REAGENTS PROVIDED*

Capture Antibody: 100 μ l of 1mg/ml anti-gp120 (HIV-1/Clade B) monoclonal antibody.

HIV-1 gp120(Clade B) Standard: 50 μ l of 50 μ g/ml recombinant gp120 (HIV-1/Clade B).

Detection Antibody: 50 μ l anti-gp120 (HIV-1/Clade B) polyclonal antibody.

Anti-Rabbit-IgG-HRP Conjugate: 50 μ l of HRP-conjugated anti-rabbit IgG.

**Initial storage at 4°C is recommended if used within a month. Store at -20°C to -80°C is desirable for long-term storage.*

RECOMMENDED MATERIALS & SOLUTIONS*

ELISA 96-well plates (Corning Prod # 3590 or equivalents)

Block Buffer: 5% milk in PBS

Wash Buffer: 0.05% Tween-20 in PBS

Diluent: 0.05% Tween-20, 0.5% milk in PBS

Substrate: TMB Peroxidase Substrate

Stop Solution: 2N Sulfuric Acid

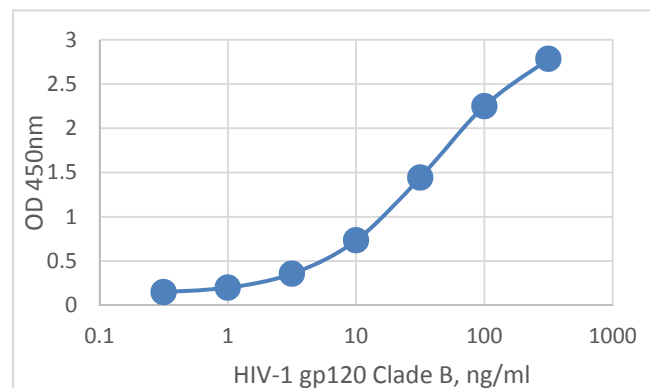
**Alternatively, these could be purchased under Cat.# IT-200-002 — ELISA Plate/Buffer/Substrate Kit.*

PLATE PREPARATION

1. For each 96-well plate, dilute 20 μ l of Capture Antibody with 10.5ml of 1xPBS to prepare a coating solution. Immediately add 100 μ l of the coating solution to each well. Seal the plate and incubate overnight at 4°C.
2. Remove the coating solution by aspirating or decanting. Invert the plate and blot it briefly against clean paper towels.
3. Add 300 μ l of Block Buffer to each well. Incubate for 2 hours at 37°C.
4. Aspirate to remove Block Buffer and wash the plate 4 times with 300 μ l of wash buffer per well.

ASSAY PROCEDURE

1. **Standard/Sample:** Dilute standard with Diluent to eight concentrations (316ng/ml, 100ng/ml, 31.6ng/ml, 10ng/ml, 3.16ng/ml, 1ng/ml, 0.316ng/ml, and 0ng/ml). Immediately add 100 μ l of Standard and sample to each well in triplicate. Incubate at 37°C for 1 hour.
2. **Detection:** Aspirate and wash plate 4 times. Dilute 10 μ l of Detection Antibody with 10.5ml of Diluent to prepare a detection solution. Add 100 μ l of the detection solution into each well. Incubate at 37°C for 1 hour.
3. **Anti-Rabbit-IgG Peroxidase:** Aspirate and wash plate 4 times. Dilute 10 μ l of anti-rabbit-IgG-HRP conjugate with 10.5ml of Diluent. Add 100 μ l into each well. Incubate at 37°C for 1 hour.
4. **Substrate/Stop:** Aspirate and wash plate 4 times. Add 100 μ l of TMB Peroxidase Substrate into each well. Incubate at 37°C for 30 minutes. Then add 100 μ l of Stop Solution to each well.
5. **Read:** Determine the optical density of each well within 30 minutes using a microplate reader set to 450nm.
6. **Analysis:** Average the triplicate reading for each standard, control, and sample, then subtract the average zero standard optical density. Create a standard curve by reducing the data using computer software capable of generating a four parameter logistic (4-PL) or other curve-fit. The HIV-1 gp120 Clade B concentration in sample can be determined by regression analysis. If samples have been diluted, the concentration calculated from the standard curve must be multiplied by the dilution factor.



Reference

John R. Crowther. The ELISA Guidebook (Methods in Molecular Biology), Humana Press, 2000.