

Recombinant HIV-1 gp120, gp41 (C-terminus)

Human, Antigen (HIV-1 gp120, gp41)

Cat. No: DAG537

Lot.No: (See product label)

PRODUCT INFORMATION

Product Overview: Recombinant Human Immunodeficiency Virus Type 1 (HIV-1) contains the C-terminus of gp120 and most of gp41. Does not contain a fusion partner, was expressed in *E. coli*.

Antigen Description: gp41/120 is the major HIV protein associated with the HIV envelope. It functions as the viral antireceptor or attachment protein. gp41 (or TM) traverses the envelope, whereas gp120 is present on the outer surface and is non-covalently attached to gp41. The precursor of gp120/41 (gp160) is synthesized in the endoplasmic reticulum and is transported via the golgi body to the cell surface. Upon activation of the envelope glycoprotein (gp120/41) by cellular receptors, gp41 undergoes conformational changes that mediate fusion of the viral and cellular membranes.

Source: *E. coli*

Form: Purified, Liquid

Molecular Mass: 27.3kDa

Purity: >95% pure (10% PAGE, coomassie staining). S-Sepharose>Ceramic Hydroxyapatite>S-300

Applications: Suitable for use in ELISA and Western blots. Each laboratory should determine an optimum working titer for use in its particular application. Other applications have not been tested but use in such assays should not necessarily be excluded.

PACKAGING

Concentration: 1mg/ml

Buffer: 50mM Tris, pH 8.0, containing 0.1% SDS, 5mM DTT, 2.5mM EDTA

Preservative: None

Storage: store at -20°C. Avoid multiple freeze/thaw cycles.

BACKGROUND

Introduction: Human immunodeficiency virus (HIV) is a lentivirus (a member of the retrovirus family) that causes acquired immunodeficiency syndrome (AIDS), a condition in humans in which progressive failure of the immune system allows life-threatening opportunistic infections and cancers to thrive. Infection with HIV occurs by the transfer of blood, semen, vaginal fluid, pre-ejaculate, or breast milk. Within these bodily fluids, HIV is present as both free virus particles and virus within infected immune cells. The four major routes of transmission are unsafe sex, contaminated needles, breast milk, and transmission from an infected mother to her baby at birth (perinatal transmission). Screening of blood products for HIV has largely eliminated transmission through blood transfusions or infected blood products in the developed world.

Key words: Retroviridae; Lentivirus; Env antibody; Env polyprotein; Envelope glycoprotein gp160; Envelope Protein gp120; Glycoprotein 41; GP120; gp41; Human Immunodeficiency Virus 1; Human Immunodeficiency Virus Type 1 gp41; TM; Transmembrane protein antibody; HIV-1 gp120, gp41; Human Immunodeficiency Virus Type 1 gp120, gp41

REFERENCES

1. Weiss RA (May 1993). "How does HIV cause AIDS?". *Science* 260 (5112): 1273–9.
2. Greener, R. (2002). "AIDS and macroeconomic impact". In S, Forsyth (ed.). *State of The Art: AIDS and Economics*. IAEN. pp. 49–55.
3. Migueles, S.; Connors, M. (2010). "Long-term Nonprogressive Disease Among Untreated HIV-Infected Individuals: Clinical Implications of Understanding Immune Control of HIV". *Journal of the American Medical Association* 304 (2): 194–201.

Creative Diagnostics. All rights reserved.