



# Human Anti-HIV-1 gp120 (CD4 binding site) Monoclonal Antibody, clone B12 (CABT- YN1392)

This product is for research use only and is not intended for diagnostic use.

## PRODUCT INFORMATION

<b>Specificity</b>	HIV
<b>Target</b>	HIV-1 gp120
<b>Immunogen</b>	The original antibody was isolated from a combinatorial Fab phage display library generated from a long term asymptomatic male infected with clade B strain of HIV-1. Later on the Fab antibody was converted to an IgG1 by cloning the variable regions into a vector for mammalian expression.
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Human
<b>Species Reactivity</b>	HIV
<b>Clone</b>	B12
<b>Purification</b>	Protein A
<b>Conjugate</b>	unconjugated
<b>Applications</b>	Neut, ELISA
<b>Epitope</b>	This antibody binds CD4 binding site of the HIV-1 GP120.
<b>Format</b>	Liquid
<b>Size</b>	200 µg, 1 mg

<b>Buffer</b>	PBS with 0.02% Proclin 300.
<b>Preservative</b>	0.02% Proclin 300
<b>Storage</b>	Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

## BACKGROUND

<b>Introduction</b>	Human Immunodeficiency Virus (HIV) isolates are currently grouped into two types, HIV-type 1 (HIV-1) and HIV-type 2 (HIV-2). The structure of the HIV particle is similar for both HIV-1 and HIV-2. Similarly to other retroviruses, the gag gene encodes the structural proteins of the core (p24, p7, p6) and matrix (p17) and the env gene encodes the viral envelope glycoproteins gp120 and gp41, which recognize cell surface receptors. The pol gene encodes for enzymes crucial for viral replication, which are the reverse transcriptase that converts viral RNA into DNA, the integrase that incorporates the viral DNA into host chromosomal DNA (the provirus) and the protease that cleaves large Gag and Pol protein precursors into their components. Each viral particle membrane includes glycoprotein heterodimer complexes composed of trimers of the external surface gp120 and the transmembrane spanning gp41 glycoproteins bound together. The binding between gp120 and gp41 is not covalent and therefore the gp120 may be shed spontaneously within the local environment and detected in the serum, as well as within the lymphatic tissue of HIV infected patients. The viral envelope glycoprotein gp120 binds CD4 and CC-chemokine receptor 5 (CCR5) on the surface of target cells triggering the fusion of the viral and host cell membranes.
<b>Keywords</b>	Glycoprotein 120; SU; surface protein gp120; env polyprotein; envelope glycoprotein gp160; HIV; HIV1; HIV-1; HIV1 GP120; HIV GP120