



# Human Anti-HIV-1 gp41 (HR-2 region) Monoclonal Antibody, clone HGF24 (CABT- YN1412)

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 gp41
<b>Immunogen</b>	The mAb was made by immortalizing IgG-expressing B cells from patients infected with diverse clades of HIV-1.
<b>Isotype</b>	IgG1
<b>Source/Host</b>	Human
<b>Species Reactivity</b>	HIV
<b>Clone</b>	HGF24
<b>Purification</b>	Protein A
<b>Conjugate</b>	unconjugated
<b>Applications</b>	Neut
<b>Epitope</b>	HIV-1 neutralising antibody, that binds to the HR-2 region within gp41 (glycoprotein 41). Binding has been mapped to the linear epitope "TNLIYTLIEESQN".
<b>Format</b>	Liquid
<b>Size</b>	200 µg, 1 mg
<b>Buffer</b>	PBS with 0.02% Proclin 300.

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<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.

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## BACKGROUND

<b>Introduction</b>	HIV-1 envelope glycoprotein [Env; trimeric (gp160)3 cleaved to (gp120/gp41)3] attaches the virion to a susceptible cell and induces fusion of viral and cell membranes to initiate infection. It interacts with the primary receptor CD4 and coreceptor (e.g., chemokine receptor CCR5 or CXCR4) to allow viral entry by triggering large structural rearrangements and unleashing the fusogenic potential of gp41 to induce membrane fusion.  Gp41, with its C terminal transmembrane (TM) segment in the viral membrane, adopts a prefusion conformation within the precursor gp160. Cleavage between gp120 and gp41 makes the protein metastable with respect to the postfusion conformation. When triggered by gp120 binding to the receptors, the N terminal fusion peptide (FP) of gp41 translocates and inserts into the target cell membrane. Subsequent rearrangements involve refolding of gp41 into a hairpin conformation, creating a six-helix bundle known as the postfusion conformation, which places the FP and TM segments at the same end of the molecule and effectively brings the two membranes together. Formation of hemifusion stalk is followed by formation of fusion pore, but formation of hemifusion stalk is reversible and go back to two separate membranes.
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<b>Keywords</b>	TM; Glycoprotein 41; SU; surface protein gp41; env polyprotein; envelope glycoprotein gp160; HIV; HIV1; HIV-1; HIV1 GP41; HIV GP41; transmembrane protein 41; HIV env protein
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