



## NIH AIDS Reagent Program

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### DATA SHEET

<b>Reagent:</b>	Anti-HIV-1 gp41 Monoclonal (50-69)
<b>Catalog Number:</b>	531
<b>Lot Number:</b>	130074
<b>Release Category:</b>	E
<b>Provided:</b>	41.3 $\mu$ L affinity purified antibody at 2.42 mg/mL
<b>Host Site:</b>	Human.
<b>Titer:</b>	ELISA: 1:1000; Western blots: 1:5; ADCC: 1:4.
<b>Special Characteristics:</b>	Obtained from EBV-immortalized peripheral blood mononuclear cells from HIV-seropositive individuals. The lymphoblastoid cells producing this monoclonal antibody were initially cultured in August of 1987. Reacts with a gp41 peptide spanning aa 579-613 in ELISA. Exact epitope has not been identified because this monoclonal reacts with the conformational determinant. Reactivity depends on the presence of a conformation which is maintained by an intrachain disulfide bond. Reacts with HIV lysate and a large recombinant peptide, p121, aa 560-641, but not with the short peptide aa 579-604. When this antibody was biotinylated and tested against a panel of anti-gp41 monoclonals, blocking of the binding region was confirmed. The antibody does not inhibit HIV <sub>IIIB</sub> or HIV-1 <sub>RF</sub> -associated cell fusion and does not neutralize HIV-1 <sub>IIIB</sub> infection of AA5 cells. It mediates ADCC against IIIB and RF-infected cells, and influences IIIB infection of MT-2 target cells through complement-mediated, antibody-dependent enhancement. When conjugated to deglycosylated ricin A chain, this monoclonal kills H9 cells infected with HIV-1 isolates IIIB, LAV, SAN, BAG, and Z34.
<b>Recommended Storage:</b>	Keep at 4°C for short term storage and -80°C for long term storage. Avoid freeze-thaw cycles as reagent degradation may result.
<b>Contributor:</b>	Dr. Susan Zolla-Pazner.

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ALL RECIPIENTS OF THIS MATERIAL MUST COMPLY WITH ALL APPLICABLE BIOLOGICAL, CHEMICAL, AND/OR RADIOCHEMICAL SAFETY STANDARDS INCLUDING SPECIAL PRACTICES, EQUIPMENT, FACILITIES, AND REGULATIONS. NOT FOR USE IN HUMANS.

**Isotype:** IgG<sub>1</sub>, κ chain.

**References:** Gorny MK, Gianakakos V, Sharpe S, Zolla-Pazner S. Generation of human monoclonal antibodies to human immunodeficiency virus. *Proc Natl Acad Sci USA* **86**:1624-1628, 1989.

Pinter A, Honnen WJ, Tilley SA, Bona C, Zaghouani H, Gorny MK, Zolla-Pazner S. Oligomeric structure of gp41, the transmembrane protein of human immunodeficiency virus type 1. *J Virol* **63**:2674-2679, 1989.

Till MA, Ghetie V, May R, Auerbach PC, Zolla-Pazner S, Gorny MK, Gregory T, Uhr JW, Vitetta ES. Immunoconjugates containing ricin A chain and either human anti-gp41 or C4 kill H9 cells infected with different isolates of HIV, but do not inhibit normal T or B cell function. *J Acquired Immune Defic Syndr* **3**:609-614, 1990.

Xu JY, Gorny MK, Palker T, Karawowska S, Zolla-Pazner S. Epitope mapping of ten human monoclonal antibodies to gp41, the transmembrane protein of HIV-1. *J Virol* **65**:4832-4838, 1991.

Tyler DS, Stanley SD, Zolla-Pazner S, Gorny MK, Shaddock PP, Langlois AJ, Matthews TJ, Bolognesi DP, Palker TJ, Weinhold KJ. Identification of sites within gp41 that serve as targets for antibody-dependent cellular cytotoxicity by using human monoclonal antibodies. *J Immunol* **145**:3276-3282, 1990.

**NOTE:** Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: Anti-HIV-1 gp41 Monoclonal (50-69) from Dr. Susan Zolla-Pazner." Also include the references cited above in any publications.

Patent pending. Corporate requests should be directed in writing to Dr. Susan Zolla-Pazner at the Veterans Administration Medical Center, 408 First Avenue, New York, NY 10010.

**Also note that contributor will like to be informed at least two weeks before submitting a document for publication or making a public oral presentation of research results obtained from the use of this material in writing or by providing a copy of the publication document.**

**Recipient must not use or incorporate the reagent for commercial purposes.**

**Last Updated** February 20, 2015

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