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DATA SHEET

Reagent:	Monoclonal IgG YZ23
Catalog Number:	12047
Lot Number:	100253
Release Category:	E
Provided:	400 µL purified IgG at 200 µg/mL, in 10mM sodium phosphate pH 7.4, 137 mM NaCl, 2.7 mM KCl.
Description:	This antibody displays binary epitope reactivity directed to gp120 residues 301-311 and residues 421-433.[1]
Host Site:	Murine hybridoma: Mouse B cells fused with NS1 myeloma cell line.
Titer:	Total protein is 200 µg/mL by bicinchonic acid protein assay.
Special Characteristics:	Immunogen: gp120MN derivatized with electrophillic phosphate diester groups.[2] IgG neutralizes subtype C HIV strain 97ZA009 (primary isolate) with an IC50 value of 8.2 µg/mL using pooled human peripheral bloord mononuclear cells (PBMC). Endotoxin concentration in stock IgG solution is 0.14 EU/mL. The endotoxin concentration will be 0.006 EU/mL at final concentration in the neutralization assay equivalent to the IC50 (8.2 µg/mL); Binds electrophilic 416-433 peptide detectably at 50 µg/mL[1]. This antibody preparation does not neutralize pseudovirion infection of the TZm-bl cell line. It neutralizes infection of PHA-activated human PBMCs by genetically diverse primary strains [belonging to subtypes A, B and C].[1] Neutralization assays are conducted as in ref 3. Briefly, human PBMCs are pooled from 4 non-HIV-infected donors and activated with 5 µg/mL phytohemagglutinin for 3 days. Virus stock is diluted in "RPMI medium" (RPMI 1640,antibiotics, 5% IL-2, 20% FBS). A primary isolate (for example, CCR5-dependent subtype C 97ZA009, 100 $TCID_{50}$ per well) is incubated for 1 hour with antibody diluted 1:2 in RMPI medium, and diluted further with 1:1 RPMI:PBS mixture. The mixture is then added into the wells containing 250,000 PBMCs in RPMI medium, and incubated for 3 days. Cells are washed and intracellular p24 is measured by ELISA on day 4. Inter-assay variability of neutralization was determined in

is measured by ELISA on day 4. Inter-assay variability of neutralization was determined in 26 repeat assays using the subtype C virus ZA009. Neutralization was detectable in 26 out of 26 assays. The IC50 values varied from 0.5-59 µg/mL.

Recommended Storage: -80°C

Contributor: Drs. Sudhir Paul and Stephanie Planque.

Isotype: IgG2a,kappa

References:

1.Nishiyama Y, Planque S, Mitsuda Y, Nitti G, Taguchi H, Jin L, Symersky J, Boivin S, Sienczyk M, Salas M, Hanson CV, Paul S. Toward effective HIV vaccination: induction of binary epitope reactive antibodies with broad HIV neutralizing activity. *J Biol Chem.* 2009 Oct 30;**284**(44):30627-42. Abstract

2. Paul S, Planque S, Zhou YX, Taguchi H, Bhatia G, Karle S, Hanson C, Nishiyama Y. Specific HIV gp120-cleaving antibodies induced by covalently reactive analog of gp120. *J Biol Chem.* 2003 May 30;**278**(22):20429-35. Abstract

3. Karle S, Planque S, Nishiyama Y, Taguchi H, Zhou YX, Salas M, Lake D, Thiagarajan P, Arnett F, Hanson CV, Paul S.Cross-clade HIV-1 neutralization by an antibody fragment from a lupus phage display library. *AIDS.* 2004 Jan 23;**18**(2):329-31. Abstract

4. Nishiyama Y, Karle S, Mitsuda Y, Taguchi H, Planque S, Salas M, Hanson C, Paul S. Towards irreversible HIV inactivation: stable gp120 binding by nucleophilic antibodies. *J Mol Recognit*. 2006 Sep-Oct; **19**(5):423-31.Abstract

NOTE: Acknowledgment for publications should read "The following reagent was obtained through the NIH AIDS Reagent Program, Division of AIDS, NIAID, NIH: Monoclonal IgG YZ23(Cat #12047) from Drs. Sudhir Paul and Stephanie Planque." Also include the references cited above in any publications.

Limited to 1 aliquot per lab.

Reagent must not be used or incorporated for commercial purposes.

Last Updated August 27, 2014