

Data Sheet

NAME: Standard Reference Panel of Subtype B HIV-1 Env Clones

REPOSITORY REFERENCE: **ARP2066**

NOTE: The 13 clones in this panel are also available individually see table:

Repository Reference	Clone	Repository Reference	Clone
ARP2043	QHO692, Clone 42 (SVPB6)	ARP2060	pTRJO4551 clone 58 (SVPB17)
ARP2044	AC10.0, Clone 29 (SVPB13)	ARP2061	pRHPA4259 clone 7 (SVPB14)
ARP2045	Pcaan5342 Clone A2	ARP2062	pTHRO4156 clone 18 (SVPB15)
ARP2056	6535, clone 3 (SVPB5)	ARP2063	pREJO4541 clone 67 (SVPB16)
ARP2057	PVO, clone 4 (SVPB11)	ARP2064	pSG3 ^{Δenv}
ARP2058	TRO, clone 11 (SVPB12)	ARP2065	SC422661, clone 8 (SVPB8)
ARP2059	pWITO4160 clone 33 (SVPB18)		

PROVIDED: 1 vial each, containing 20 µg (0.5 mg/ml) of plasmid DNA in TE buffer, except for **ARP2060** with concentration of 0.47 mg/ml and **ARP2062** with concentration of 1 mg/ml.

Clones **ARP2043**, **ARP2044** and **ARP2056-2058** have ampicillin and neomycin marker while the rest have only ampicillin marker.

CLONING SITE: The HIV-1 env/rev cassette was either directly cloned (**ARP2043**, **2044** and **ARP2056-2058**) or TA cloned (**ARP2045**, **ARP2059-2063** and **ARP2065**) into the cloning site of the expression vector in the correct orientation with the CMV promoter. For expansion of plasmids refer to individual data sheets.

ARP2064 was derived by Spel partial digestion from pSG3.1 (*Available from NIH Cat# 2003*), klenow filling of the 3' recessed ends and religation.

DESCRIPTION:

This reference panel was designed for use as Env-pseudotyped viruses to facilitate standardized Tier 2/3 assessments (Mascola JR. et al. *J Virology* **79**(16):10103, 2005) of neutralizing antibody responses. When cotransfected with an *env*-deleted backbone plasmid (e.g. pSG3env, **ARP2064**, included in the Panel) in 293T cells, these plasmids produce Env-pseudotyped viruses that are capable of a single round of infection in TZM-bl cells (**ARP5011**). The TZM-bl cell line is not part of this panel, therefore it should be separately ordered. The pseudoviruses exhibit a neutralization phenotype that is typical of most primary HIV-1 isolates. Notably, no clone is unusually sensitive or resistant to neutralization. The gp160 genes were cloned from sexually acquired, acute/early infections and comprise a wide spectrum of genetic, antigenic and geographic diversity within subtype B (Li M, et al. *J Virology* **79** (16):10108, 2005). These clones use CCR5 as co-receptor.

STORAGE:

-80°C

SOURCE:

See table. (Courtesy of NIH AIDS Research and Reference Reagent Programme.)

REFERENCE:

Li, M., Gao F., Mascola J.R., Stamatatos L., Polonis V.R., Koutsoukos M., Voss G., Goepfert P., Gilbert P., Greene K.M., Bilska M., Kothe D.L., Salazar-Gonzalez J.F., Wei X., Decker J.M., Hahn B.H., and Montefiori D.C. Human immunodeficiency virus type 1 env clones from acute and early subtype B infections for standardized assessments of vaccine-elicited neutralizing antibodies. *J. Virology* **79**(16): 10108-10125, 2005.

Wei S, Decker JM, Liu H, Zhang Z, Arani RB, Kilby JM, Saag MS, Wu X, Shaw GM and Kappes JC. Emergence of resistant human immunodeficiency virus type 1 in patients receiving fusion inhibitor (T-20) monotherapy. *Antimicrob Agents Chemother* **46**: 1896-1905, 2002.

Wei X, Decker JM, Wang S, Hui H, Kappes JC, Wu X, Salazar-Gonzalez JF, Salazar MG, Kilby JM, Saag MS, Komarova NL, Nowak MA, Hahn BH, Kwong PD and Shaw GM. Antibody neutralization and escape by HIV-1. *Nature* **422**: 307-312, 2003.

ACKNOWLEDGEMENTS:

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Please also ensure that you send us a copy of any papers resulting from work using reagents acquired through CFAR (this can be electronically or as a paper copy)

NOTE:

Scientists at for-profit institutions or who intend commercial use of Reagents (ARP2045 and 2059-2064), must contact William S. White, UAB Research Foundation, The Office of Intellectual Property Management, AB 1120G, 1530 3rd Ave. S, Birmingham AL 35294-0111, Tel: 205-996-2550 Fax: 205-934-5427, email: wwhite@uab.edu, before the reagent can be released.

PLASMID EXPANSION PROCEDURE:

Plasmids **ARP2056, ARP2043, ARP2057, ARP2058, ARP2044, and ARP2064** plasmids were expanded using DH5 α TM Competent Cells in LB medium at 34°C.

Plasmid **ARP2060** was expanded using MAX Efficiency STBL2TM Competent Cells in LB medium.

Plasmids **ARP2059, ARP2063, ARP2061 and ARP2045** can be expanded using MAX Efficiency STBL2TM Competent Cells or DH5 α TM Competent Cells in LB medium at 34°C.

Plasmid **ARP2062** was expanded using MAX Efficiency STBL2TM Competent Cells (Invitrogen) in Terrific Broth (TB) medium at 30°C.

Plasmid **ARP2065** was expanded using TOP 10 Competent Cells in LB medium at 30°C.



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TABLE: REFERENCE PANEL FOR SUBTYPE B HIV-1 ENV CLONES (Catalog #11227)

ARP	Cal#	Reagent Name	Lot#	Insert/ Vector size	Vector Type	Accession Number	Reagent Contributor ¹	Mode of Transmission	Location	Release Category ²
2056	11017	6535, clone 3 (SVPB5)	2 050733	3106bp/8620bp	pcDNA3.1D/V5-His TOPO®	AY835438	A	M-M	Washington DC	B
2043	11018	QH0692, clone 42 (SVPB6)	2 050734	3052bp/8566bp	pcDNA3.1D/V5-His TOPO®	AY835439	A	F-M	Trinidad	B
2057	11022	PVO, clone 4 (SVPB11)	2 050735	3119bp/8633bp	pcDNA3.1D/V5-His TOPO®	AY835444	A	M-M	Italy	B
2058	11023	TRO, clone 11 (SVPB12)	2 050736	3121bp/8635bp	pcDNA3.1D/V5-His TOPO®	AY835445	A	M-M	Italy	B
2044	11024	AC10.0, clone 29 (SVPB13)	2 050737	3112bp/8626bp	pcDNA3.1D/V5-His TOPO®	AY835446	A	M-M	Massachusetts	B
2059	11033	pWITO4160 clone 33 (SVPB18)	2 050738	2953bp/8476bp	pcDNA3.1/V5-His® TOPO®	AY835451	B	F-M	Alabama	C
2060	11034	pTRJO4551 clone 58 (SVPB17)	4 050815	2982bp/8505bp	pcDNA3.1/V5-His® TOPO®	AY835450	C	M-M	Alabama	C
2063	11035	pREJO4541 clone 67 (SVPB16)	2 050740	2959bp/8482bp	pcDNA3.1/V5-His® TOPO®	AY835449	B	F-M	Alabama	C
2061	11036	pRHPA4259 clone 7 (SVPB14)	2 050741	2946bp/8356bp	pcDNA3.1(+)	AY835447	B	M-F	Tennessee	C
2062	11037	pTHRO4156 clone 18 (SVPB15)	2 050742	3024bp/8440bp	pcDNA3.1(+)	AY835448	D	M-M	Alabama	C
2045	11038	pCAANS342 clone A2 (SVPB19)	2 050743	2889bp/8412bp	pcDNA3.1/V5-His® TOPO®	AY835452	D	M-M	Alabama	C
2064	11051	pSG3deltaEnv	3 050744	14500bp	pTZ19U	L02317	E	N/A	N/A	C
2065	11058	SC 422661.8 (SVPB8)	2 050745	2886bp/8409bp	pcDNA3.1D/V5-His TOPO®	AY835441	A	F-M	Trinidad	B

Contributors¹

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 D – Drs. B.H. Hahn and D.L. Kothe
 E – Drs. J.C. Kappes and X. Wu

Release Category²

See NOTE regarding Release Category C on Page 2 of Data Sheet