Centre for AIDS Reagents

Data Sheet

DESCRIPTION: HIV-1 Env gp160 clones from 10 isolates (Clades A, B, C, D & E)

REPOSITORY REFERENCE: **ARP2130.1-10**

CLONING VECTOR: pNL-lacZ/env-Ren

DESCRIPTION OF CLONE: The *env* gene (complete gp160) of 10 viruses representative of the five primary clades A to E[1] was amplified by PCR from viral RNA using specific primers, digested with XbaI and NotI and inserted in the same sites in the pNL-lacZ/env-Ren[2] with the resulting the plasmids in the table below.

Catalogue Number	Plasmid name	Env	Subtype	Tropism	V3 sequence
ARP2130.1	pNL-92RW009-Ren	92RW009	A	R5X4	CSRPNNNTRKSVHIGPGQAFYATGDVIGDIRQAYC
ARP2130.2	pNL-VI191-Ren	VI 191	A	R5	CTRPSNNTRKGIHIGPGRAIYATGEIIGDIRQAHC
ARP2130.3	pNL-SF162-Ren	SF162	B	R5	CTRPNNNTRKSITIGPGRAFYATGDIIGDIRQAHC
ARP2130.4	pNL-MN-Ren	MN(P)	B	X4	CTRPIYTEKKRIHIGPGRAFYTTKNIKGTIRQAHC
ARP2130.5	pNL-QH0692-Ren	QH0692	B (US)	R5	CTRPGNNTRKSIHIGPGRAFYATGDIIGDIRQAHC
ARP2130.6	pNL-AC10-Ren	AC10	B (US)	R5	CIRPNNNTRKGIHIGPGRAFYTTGDIIGDIRQAHC
ARP2130.7	pNL-DU174-Ren	DU174	C	R5	CTRPGNNTRQSIRIGPGQAFFATKEIIGDIRQAHC
ARP2130.8	pNL-92BR025-Ren	92BR025	C	R5	CTRPNNNTRKSIRIGPGQAFYATGEIIGDIRQAHC
ARP2130.9	pNL-92UG024-Ren	92UG024	D	X4	CTRPYNNIRQRTPIGLGQALYTTRRIEDIRRAHC
ARP2130.10	pNL-CM244-Ren	CM244	E	R5	CTRPSNNTRTSITIGPGQVFYRTGDIIGDIRKAYC

APPLICATIONS: In vitro expression of recombinant gp160.

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REFERENCES:

[1]Fenyo EM, Heath A, Dispinseri S et al. International network for comparison of HIV neutralization assays: the NeutNet report. *PLoS. One.* 2009; **4**: e4505.

[2]González N, Pérez-Olmeda M, García-Pérez J et al. Evaluation of HIV-1 tropism using a new and sensitive system based on recombinant viruses. In *XVII international HIV drug resistance workshop*. Published in Antiviral Therapy. 2008; **Supplement 3**: P1-P4.

[3]Garcia-Perez J, Sanchez-Palomino S, Perez-Olmeda M, Fernandez B, and Alcami J. A new strategy based on recombinant viruses as a tool for assessing drug susceptibility of human immunodeficiency virus type 1. *J. Med. Virol.* 2007; **79**: 127-137.

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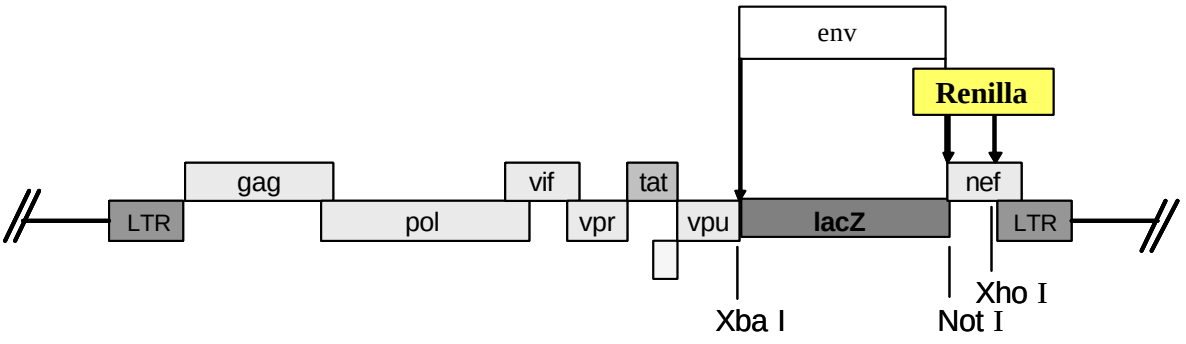
Please also ensure that you send us a copy of any papers resulting from work using reagents acquired through CFAR (this can be electronically or as a paper copy)

Plasmid Production Information

The vector pNL-lacZ/env-Ren was generated introducing an XbaI restriction site by PCR site-directed mutagenesis (Quick Change Site-Directed Mutagenesis Kit, Stratagene) in the 6114 position of the pNL4-3Ren, followed by *env* deletion digesting with XbaI and NotI and *env* coding sequence replacement by the amino-terminal fragment of the *lacZ* gene. This system allows the *lacZ* gene replacement with the full-length HIV-1 *env* genes of different HIV strains or of patient samples, and avoids the interference due to wild type sequences.



The vector pNL4-3Ren [3] was generated by replacing the gene *nef* of the HIV-1 proviral clone pNL4-3 (National Institutes of Health AIDS Research and Reference Reagent Program, catalogue number 114) by the *Renilla* luciferase gene. To clone the *Renilla* luciferase gene, a NotI restriction site was introduced near the 5' end of the *nef* coding region (8797 position of the pNL4.3Ren) by PCR site-directed mutagenesis (Quick Change Site-Directed Mutagenesis Kit, Stratagene).