



SureVector Next-Gen Cloning Kits

YOUR VISION. YOUR VECTORS.

Benefits

The power of synthetic biology; validated, verified and ready to help you achieve your vision!

- Rapid custom vector generation – from design to transformation in less than 30 minutes
- Enhanced flexibility – assemble new vectors quickly, rather than ordering new ones
- Control of experiments – get the construct you want when you want it
- Reliable and precise assembly – extensively validated; the only next-generation plasmid assembly technology to guarantee assembly of multiple functional DNA fragments

Use our web tool to explore the possibilities!
www.agilent.com/genomics/surevector

Overview

Agilent's SureVector system enables the rapid and reliable assembly of multiple DNA modules into a recombinant plasmid containing your target gene. These DNA modules consist of functional components (selection markers, promoters, etc.) that make up existing cloning vectors. These synthetic DNA fragments, or synthons, allow SureVector to harness the power of synthetic biology's standard parts to assemble custom vector constructs. SureVector is complemented by an easy-to-use web interface where you can configure any of the thousands of buildable vectors. Once you have the kit in your lab, a custom plasmid containing your gene-of-interest is then just a single 20 minute reaction away.

The Next-Generation of DNA Assembly

Numerous novel DNA assembly techniques have seen frequent and increasing use in the molecular biology community. New methods of seamless cloning and DNA assembly are rapidly displacing traditional restriction enzyme-ligation based cloning. While these techniques work well, they require significant knowledge and planning to obtain the types of efficiencies seen by expert users. Agilent's SureVector is the next-gen assembly technology that allows the user to build DNA constructs in a well-validated and controlled system, removing the guesswork and assuring that you spend less time doing molecular cloning and more time on the experiments you want to.

Technical Overview

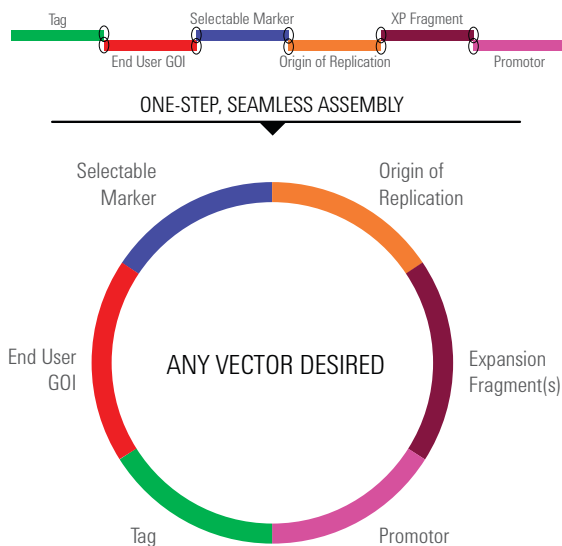


Figure 1: Components of the SureVector core kit are shown above. Combinatorial shuffling of individual components leads to a total of 216 possible vectors from the core kit alone! The number of possible SureVector constructs increases to over 700,000 with the addition of the fragments available in the expansion kit.

SureVector Core Kit

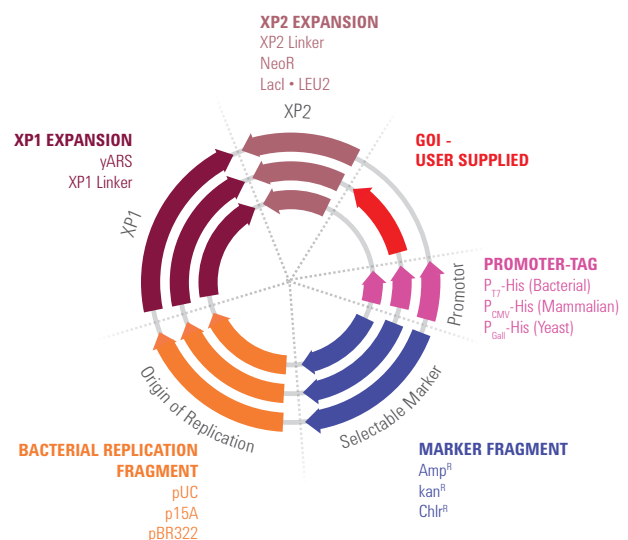


Figure 2: Choose the fragments you want, combine the reagents in a tube and run the assembly protocol. Additional steps both up and downstream in your workflow remain unchanged compared to existing cloning technologies.



Feature	Service Providers	Catalog Vectors	Home-Brew Assembly	SureVector
Cost per vector	\$\$\$	\$\$	\$\$\$\$	\$
Integrated, validated workflow	No	Varies	No	Yes
Time to new vector	2-6 weeks	2-7 days	3-4 weeks	<1 day
Next-generation assembly	No	No	Yes	Yes
Web-based design tool	Yes	No	No	Yes

Ordering Information

The SureVector core kit provides functionality in *E. coli*, yeast, and mammalian cells and includes all of the buffers, enzymes and nucleotides required to generate SureVector plasmids in less than 20 minutes of hands-on time.

The *E. coli* selection kit provides a cost-effective entry into the SureVector system while allowing you to experience the ease and flexibility of SureVector. The SureVector system additionally offers a wide variety of fragments to expand functionality in *E. coli*, yeast and mammalian cells.

SureVector System Fragments & Part Numbers			
	<i>E. coli</i>	Mammalian	Yeast
Promoters	T7 (G7515A-B)	CMV (G7516A-B)	GAL1 (G7517A-B)
	Trp (G7515A-B, G7518B-C)	SV40 (G7516A-B)	CUP1 (G7517A-B)
	Tac (G7515A-B, G7518B-C)	EF-1a (G7516A-B)	ADH1 (G7517A-B)
	Rhamnose (G7515A-B, G7518B-C)		
Tags	GST (n-term only) (G7515A, G7518D)	6xHis (G7516A-B)	6xHis (G7517A-B)
	MBP (n-term only) (G7515A, G7518D)	c-Myc (G7516A-B)	c-Myc (G7517A-B)
	DsbA (n-term only) (G7515A, G7518D)	3xFLAG (G7516A-B)	3xFLAG (G7517A-B)
	6xHis (G7515A-B, G7518D-E)	hrGFPII (G7516A-B)	hrGFPII (G7517A-B)
	SBP (G7515A-B, G7518D-E)	3xHA (G7516A-B)	3xHA (G7517A-B)
	CBP (G7515A-B, G7518D-E)	SBP (G7516A-B)	SBP (G7517A-B)
	Thioredoxin (c-term only) (G7515B, G7518E)		
	c-Myc (c-term only) (G7515B, G7518E)		
Bacterial Selection	HA (c-term only) (G7515B, G7518E)		
	AmpR (G7514A, G7518A-E)	AmpR (G7514A, G7518A-E)	AmpR (G7514A, G7518A-E)
	CamR (G7514A, G7518A)	CamR (G7514A, G7518A)	CamR (G7514A, G7518A)
Bacterial Origins of Replication	KanR (G7514A, G7518A)	KanR (G7514A, G7518A)	KanR (G7514A, G7518A)
	pUC (G7514A, G7518A-G)	pUC (G7514A, G7518A-G)	pUC (G7514A, G7518A-G)
	p15A (G7514A)	p15A (G7514A)	p15A (G7514A)
XP1 Fragments	pBR322 (G7514A)	pBR322 (G7514A)	pBR322 (G7514A)
	XP1 (G7514A, G7518A-G)	yARS (G7514A)	XP1 (G7514A, G7518A-G)
XP2 Fragments	Lacl (G7514A, G7518A-G)	Blasticidin (G7516A)	URA3 (G7517A)
	XP2 (G7514A)	Gentamycin (G7516A)	HIS3 (G7517A)
		Puromycin (G7516A)	Hygromycin (G7517A)
		NeoR (G7514A)	LEU2 (G7517A)
Promoter-Tag Fusions	His-T7 (G7514A)	His-CMV (G7514A)	His-GAL1 (G7514A)

Request more information at www.agilent.com/genomics or call your Agilent service representative for a demo.



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