



ACE2 Swift Normalase® Amplicon Panel (SNAP)

An Expanded SARS-CoV-2 Research Tool for Susceptibility and Transmission.

Highlights

- **Increased multiplexing capacity**
Sequence up to 384-plexed libraries.
- **Improved target enrichment solutions**
Efficient single tube workflow with overlapping amplicons for full coverage.
- **Superior quality from the low sample input**
Achieve full ACE2 coding region coverage from as little as 10ng of DNA.



Introduction

The ACE2 Swift Normalase Amplicon Panel (SNAP) contains 41 amplicons with an average size of 150 bp that provides comprehensive coverage of all coding regions of ACE2.

The ACE2 SNAP Panel utilizes multiple overlapping amplicons in a single tube, using a rapid, 2-hour workflow to prepare ready-to-sequence libraries. The PCR1+PCR2 workflow generates robust libraries, even from low input quantities. The libraries may be quantified with conventional methods, including Qubit® or Agilent Bioanalyzer and normalized by manual pooling or normalized enzymatically with the included Swift Normalase reagents.

Human ACE2 has been identified as a key receptor for SARS-CoV-2 host cell entry. Although SARS-CoV also utilizes ACE2 as a receptor, SARS-CoV-2 has acquired several mutations that increase its binding affinity to ACE2 relative to SARS-CoV. Variation in ACE2 sequences and expression levels can impact the ability of SARS-CoV-2 to successfully bind and enter host cells. In fact, numerous ACE2 variants have recently been implicated in disease susceptibility and severity. Sequencing ACE2 has the potential to provide insight into disease outcomes and facilitate further epidemiological investigations.

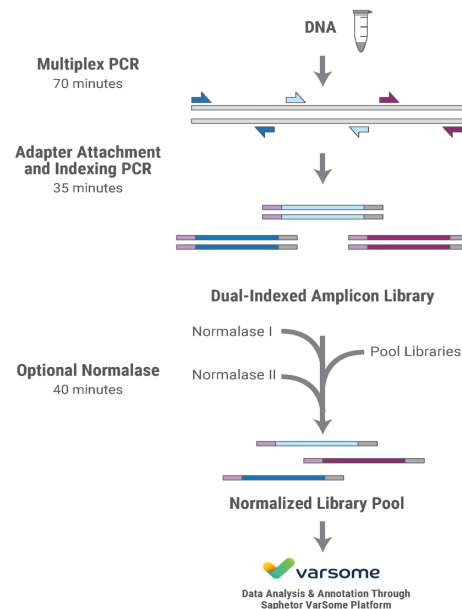
Single-Tube, 2-Hour Workflow

Fast, Easy, Standardized Workflow

The ACE2 Swift Normalase Amplicon Panel uses an easy, fast single-tube approach consisting of a 70-minute target enrichment step and a 35-minute indexing step, yielding a 2-hour start-to-finish procedure. It enables simultaneous amplification of overlapping amplicons in a single-tube reaction, minimizing hands-on time and sample processing errors.

Superior Quality with Low Input Samples

The ACE2 Amplicon Panel requires sample input as low as 10 ng per sample and is compatible with a wide variety of sample types, including genomic DNA from reference DNA, whole blood, dried blood spots (DBS/Guthrie cards), saliva, and buccal swabs. The panel is optimized to generate high quality data with > 95% on-target specificity and coverage uniformity.

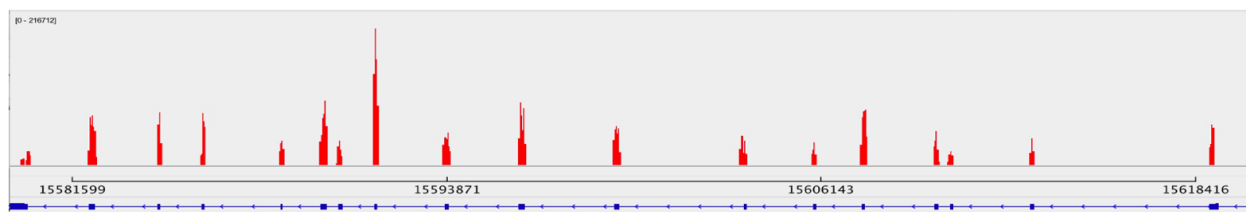


ACE2 Swift Normalase Supported Applications and Sample Types

- Applications: Genome/Host Detection, Variant Calling, Epidemiological Studies, Public Health Surveillance. *Please inquire for custom targets.*
- Sample Types: High quality DNA, gDNA, whole blood, dried blood spots (DBS/Guthrie cards), saliva, buccal swabs are some examples.

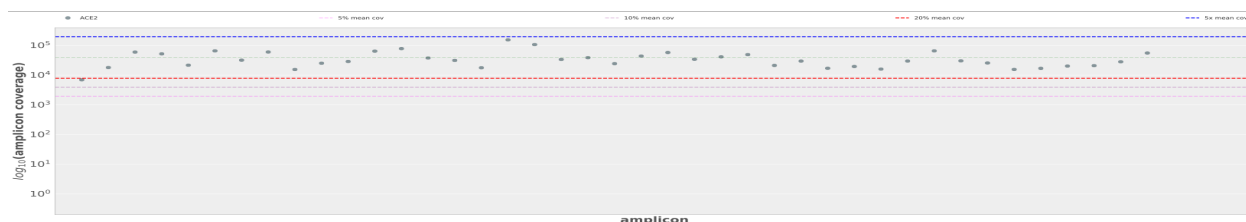
High Quality Data

Figure 1: Comprehensive Coverage Over ACE2



Coverage of all coding regions of ACE2 by the ACE2 SNAP panel is represented in a Sashimi Plot (IGV: Broad Institute).

Figure 2: ACE2 Gene Amplicon Read Depth



The panel was used to prepare libraries using 10ng input of high quality Coriell NA12878 gDNA into Swift SNAP workflow and sequenced on a MiniSeq® instrument. Representative plot demonstrates coverage for each amplicon. Red and blue dashed lines represent 5x of the mean coverage and 20% of the mean coverage, respectively.

Specifications

Feature	Specification
Panel Information	41 amplicons, sized 140 – 235 bp (average 150 bp)
Panel Target Size	4.0 kb
On Target Percentage	>95%
Coverage Uniformity	>95%
Input Material	10 – 25 ng of DNA
Time	2 hours DNA-to-Library
	3 hours DNA-to-Normalized Library Pool
Components Provided	<ul style="list-style-type: none"> • Target-Specific Multiplex Primer Pool • Library Prep Reagents • Swift Normalase • Combinatorial Dual Indexing Primers
	Note: Kit does not contain magnetic beads
Multiplexing Capability	Up to 384 CDI

Ordering Information

Workflow Component	Product Name	Reactions	Catalog No.
Primer Pool	ACE2 Gene Panel Primers	96	ACE2G1-96
SNAP Core	Swift Normalase Amplicon Core Kit	96, No indexing	SN-5X296
Indexing Primers*	SNAP Combinatorial Dual Index Primer Kit	96, Set 1A	SN-5S1A96
	SNAP Combinatorial Dual Index Primer Kit	96, Set 1B	SN-5S1B96
	SNAP Combinatorial Dual Index Primer Kit	96, Set 2A	SN-5S2A96
	SNAP Combinatorial Dual Index Primer Kit	96, Set 2B	SN-5S2B96
VarSome Tool	VarSome Data Analysis Token	48 Samples	AL-VS48

**Please inquire for custom index primer compatibility (UDIs, etc.).*

Nous contacter



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