

Ion Torrent™ CarrierSeq™ ECS Kits

Catalog Numbers A43585, A48022, A43586, A48023, A43471, and A48036

Pub. No. MAN0018485 Rev. A.0

Note: For safety and biohazard guidelines, see the “Safety” appendix in the *Ion Torrent™ CarrierSeq™ ECS Kits User Guide* (Pub. No. MAN0018483). Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

For a detailed protocol, see the *Ion Torrent™ CarrierSeq™ ECS Kits User Guide* (Pub. No. MAN0018483).

Product description

The Ion Torrent™ CarrierSeq™ ECS Kits provide a comprehensive targeted next-generation workflow for expanded carrier screening (ECS) from genomic DNA isolated from blood or saliva samples. The Ion AmpliSeq™ CarrierSeq™ ECS Panel detects single nucleotide variants (SNVs), insertion/deletions (INDELs), and copy number variants (CNVs) for 418 inherited disorders in a single assay. The kits provide all of the reagents and materials, including the Ion AmpliSeq™ CarrierSeq™ ECS Panel, for library preparation and sequencing on the Ion GeneStudio™ S5 Systems.

Kit summary

The Ion Torrent™ CarrierSeq™ ECS Kits (Cat. Nos. A43585, A43586, A48022, and A48023) consist of the Ion AmpliSeq™ CarrierSeq™ ECS Panel, the Ion AmpliSeq™ Library Kit Plus, and reagents for templating and sequencing barcoded sample libraries on either the Ion 530™ Chip or the Ion 540™ Chip.

Component	Quantity per kit			
	A43585 ^[1]	A48022 ^[2]	A43586 ^[3]	A48023 ^[4]
Ion AmpliSeq™ CarrierSeq™ ECS Panel ^[5]	1	NA	4	NA
Ion AmpliSeq™ CarrierSeq™ ECS Panel ^[5]	NA	1	NA	5
Ion AmpliSeq™ Library Kit Plus ^[6]	1	NA	4	NA
Ion AmpliSeq™ Library Kit Plus ^[6]	NA	1	NA	5
Ion 530™ Chip Kit ^[7]	6	1	NA	NA
Ion 510™ & Ion 520™ & Ion 530™ Kit – Chef ^[8,9]	3	1	NA	NA
Ion 540™ Chip Kit ^[10]	NA	NA	6	2
Ion 540™ Kit – Chef ^[8,11]	NA	NA	3	1

^[1] 96 samples, 4 samples per chip

^[2] 24 samples, 3 samples per chip

^[3] 384 samples, 16 samples per chip

^[4] 120 samples, 15 samples per chip

^[5] Cat. Nos. A43471 and A48036

^[6] Cat. Nos. A35907 and 4488990

^[7] Cat. No. A27763

^[8] This kit consists of Ion Chef™ Supplies, Ion Chef™ Solutions, Ion Chef™ Reagents, Ion S5™ Sequencing Solutions, and Ion S5™ Sequencing Reagents.

^[9] Cat. No. A34461

^[10] Cat. No. A27765

^[11] Cat. No. A30011

Ion AmpliSeq™ CarrierSeq™ ECS Panel

Contents	Reactions	Storage
Cat. No. A43471, 96 reactions		
Pool 1	96	-30°C to -10°C
Pool 2	96	
Cat. No. A48036, 24 reactions		
Pool 1	24	-30°C to -10°C
Pool 2	24	

Ion AmpliSeq™ Library Kit Plus

Component	Amount		Storage
	Cat. No. 4488990 (24 reactions)	Cat. No. A35907 (96 reactions)	
5X Ion AmpliSeq™ HiFi Mix (red cap)	120 µL	480 µL	-30°C to -10°C
FuPa Reagent (brown cap)	48 µL	192 µL	
Switch Solution (yellow cap)	96 µL	384 µL	
DNA Ligase (blue cap)	48 µL	192 µL	
25X Library Amp Primers (pink cap)	48 µL	192 µL	
1X Library Amp Mix (black cap)	1.2 mL	4 × 1.2 mL	
Low TE	6 mL	2 × 6 mL	15°C to 30°C ^[1]

^[1] Can be stored at -30°C to -10°C.

Sequencing chips

Chip kit	Cat. No.	Amount	Storage
Ion 530™ Chip Kit	A27763	4 chips	15°C to 30°C
Ion 540™ Chip Kit	A27765		

Templating and sequencing reagents

IMPORTANT!

- Do not substitute components from any other sequencing kits. We have verified this protocol using these specific materials. Substitution can adversely affect system performance.
- Store all consumables and cartridges under the recommended conditions and in an upright position. Do NOT store the Ion S5™ Sequencing Reagents (Part No. A27768) on dry ice or in a closed environment where dry ice is present.

On arrival, inspect all consumables and contact Technical Support if any of the products have been damaged during shipping.

Component	Quantity per kit
Ion S5™ Chef Supplies	4 boxes
Ion S5™ Chef Solutions	1 box
Ion 510™ & Ion 520™ & Ion 530™ Chef Reagents or Ion 540™ Chef Reagents	1 box
Ion S5™ Sequencing Solutions	1 box
Ion S5™ Sequencing Reagents	1 box

Ion Chef™ reagents and materials

Contents	Amount / box	Storage
Ion S5™ Chef Supplies		
Chip Adapter	2	15°C to 30°C
Enrichment Cartridge v2	1	
Tip Cartridge v2	1	
PCR Plate	1	
Frame Seal v2	1	
Recovery Station Disposable Lid v2	2	
Recovery Tube v2	12	
Ion S5™ Chef solutions		
Ion S5™ Chef Solutions	4 cartridges	15°C to 30°C

Contents	Amount / box	Storage
Ion S5™ Chef reagents		
One of the following: <ul style="list-style-type: none"> Ion 510™ & Ion 520™ & Ion 530™ Chef Reagents Ion 540™ Chef Reagents 	4 cartridges	-30°C to -10°C

Ion S5™ sequencing reagents and materials

IMPORTANT! Do not store the Ion S5™ Sequencing Reagents on dry ice or in a closed environment containing dry ice.

Contents	Amount / box	Storage
Ion S5™ Sequencing Solutions		
Ion S5™ Wash Solution	4 × 1.5 L	15°C to 30°C
Ion S5™ Cleaning Solution	250 mL	
Ion S5™ Sequencing Reagents		
Ion S5™ Sequencing Reagents	4 cartridges	-30°C to -10°C ^[1]

^[1] Cartridges ship at 2°C to 8°C. Store as indicated, do not store on dry ice.

Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale at www.thermofisher.com/us/en/home/global/terms-and-conditions.html. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



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For descriptions of symbols on product labels or product documents, go to thermofisher.com/symbols-definition.

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Revision history: Pub. No. MAN0018485

Revision	Date	Description
A.0	16 April 2020	New document for the Ion Torrent™ CarrierSeq™ ECS Kits.

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