NEXTFLEX® Universal Blockers

(Compatible with Illumina® Platforms)

KIT CONTAINS : 16, 48, or 192 RXNS

USER MANUAL FOR :
#NOVA-5143231
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NEXTFLEX® Universal Blockers

GENERAL INFORMATION

Product Overview

The NEXTFLEX® Universal Blockers are designed to prevent concatermerization of library molecules during target capture hybridizations via the adapter sequences that are added to all library molecules before enrichment. Each strand of these adapter sequences can hybridize with the complementary adapter sequence strand of another library molecule during this enrichment hybridization, creating a "daisy-chain" effect between off-target library molecules and the on-target library molecules that are intended targets of the capture probe set used in the enrichment hybridization. By blocking this complementary adapter sequence interaction, the number of on-target reads improves dramatically and the depth of enrichment increases.

The NEXTFLEX® Universal Blockers are designed for use with Illumina® indexed adapters. They are effective in blocking single-indexed or dual-indexed libraries, without being affected by index length or the presence of a unique molecular index (UMI). The NEXTFLEX® Universal Blockers are designed to target both strands of the adapter sequence regions.

The NEXTFLEX® Universal Blockers are compatible with ligation-based workflows, such as the libraries prepared with NEXTFLEX® Unique Dual-Indexed Barcodes. They are also compatible with tagmentation-based workflows, such as Illumina® Nextera™ library prep kits.

Kit Contents, Storage and Shelf Life

The kits contain enough materials to prepare 8, 48, or 96 hybridization reactions. The shelf life is at least 12 months when stored properly. Store at -20˚C.

Kit Contents	Cap Color	Amount (8 rxn / 48 rxn / 96 rxn)	Storage Temp.
NEXTFLEX® Universal Blockers	GREY CAP	4.8 / 29 / 58 µL	-20°C

Warnings and Precautions

We strongly recommend that you read the following warnings and precautions. Periodically, optimizations and revisions are made to the components and manual. Therefore, it is important to follow the protocol included with the kit. If you need further assistance, you may contact your local distributor, or contact us at NGS@revvity.com

- Do not use the kit past the expiration date.
- Ensure pipettes are properly calibrated as library preparations are highly sensitive to pipetting error.
- Try to maintain a laboratory temperature of 20°–25°C (68°–77°F).

Version	Date	Description
V21.05	May 2021	Product Launch
V23.11	November 2023	Rebrand to Revvity

Usage

The NEXTFLEX® Universal Blockers can be used with IDT™ xGEN™, Twist Bioscience, and Agilent® SureSelect hybridization capture libraries and workflows.

Recommendations:

IDT™ xGEN™ Hybridization Capture Libraries

Follow Standard protocol of xGEN™ hybridization capture libraries. During hybridization step use 0.6 µL of NEXTFLEX® Universal Blocker per reaction, instead of 2 uL of xGEN™ blocker, independent of library type (Illumina® Truseq™ or Nextera™ type) and index length and/or UMI.

Blocker Master Mix Component	Volume per reaction
Human Cot DNA	5 µL
NEXTFLEX® Universal Blockers	0.6 µL
TOTAL	5.6 µL

Twist Bioscience Hybridization Capture Libraries

Follow Standard protocol of Twist Bioscience hybridization capture libraries. During hybridization step use 0.6 µL of NEXTFLEX® Universal Blocker per reaction, instead of 8 µL of Twist Universal Blocker, independent of library type (Illumina® Truseq™ or Nextera™ type) and index length and/or UMI.

Blocker Master Mix Component	Volume per reaction
Dried Indexed Library Pool	-
Blocker Solution	5 µL
NEXTFLEX® Universal Blockers	0.6 µL
Nuclease-free Water	7.4 µL
TOTAL	13 µL

Agilent® SureSelect Hybridization Capture Libraries

Follow Standard protocol of Agilent® SureSelect hybridization capture libraries. During hybridization step use 0.6 µL of NEXTFLEX® Universal Blocker per reaction, instead of 0.6 µL of Block 3, independent of library type (Illumina® Truseq™ or Nextera™ type) and index length and/or UMI.

Blocker Master Mix Component	Volume per reaction
SureSelect Indexing Block 1	2.5 µL
SureSelect Block 2	2.5 µL
NEXTFLEX® Universal Blockers	0.6 µL
TOTAL	5.6 µL

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