

nCounter® Human v2 miRNA Expression Assay

Product Description

The **nCounter® Human v2 miRNA Expression Assay** allows researchers to analyze miRNA expression using the fully-automated nCounter Analysis System workflow. The nCounter® Human v2 miRNA Sample Preparation kit provides reagents for ligating unique oligonucleotide tags onto 800 human miRNAs, allowing these short RNAs to be detected with great specificity and sensitivity with the nCounter Human v2 miRNA CodeSet via the nCounter Analysis System.

Reference Documents

- *nCounter miRNA Expression Assay Manual*
- *nCounter Analysis System Brochure*
- *nCounter Prep Station User Manual*
- *nCounter Digital Analyzer User Manual*
- *nCounter Data Analysis Guidelines for Expression*

nCounter Human v2 miRNA Expression Assay

Component	Volume per Tube (µL)	Assay per Tube	Storage Conditions
nCounter Human v2 miRNA CodeSet and Controls	130	12	-80°C
nCounter Human v2 miRNA Capture ProbeSet	70	12	-80°C
miRNA annealing buffer	18	12	-20°C
nCounter Human v2 miRNA Tag Reagent	30	12	-20°C
miRNA assay controls	15	12	-80°C
PEG	30	>12	room temp
Ligation buffer	20	>12	-20°C
Ligase	15	12	-20°C
Ligation clean-up enzyme	18	12	-20°C
12-strip tube with caps	1 per 12 assays		room temp

Storage Conditions: Store for up to 1 year at listed conditions

The Human v2 miRNA kit also includes a USB drive that contains:

- *Three read-only folders for Cartridge Definition files (CDFData), Reporter Library files (RLFData), and Reporter Code Count files (RCCData)*
- *A RLF and CDF template*
- *PDF copies of the reference documents listed above*
- *nSolver Analysis Software*
- *This product specifications sheet*
- *Material Safety Data Sheet(s)*

Testing and Quality Control

All nCounter miRNA CodeSets are functionally tested.

Specifications

Description	Volume
Number of targets	800 Human miRNAs
Recommended amount of starting material	100 ng purified total RNA
Sample types supported	Human purified total RNA
miRNA sample prep reaction volume	10 µL
Hybridization reaction volume	30 µL
Limit of detection	≤ 0.5 fM (~10 copies per cell)
Fold change sensitivity	≥ 2-fold change
Synthetic miRNA spike titration linearity	R ² ≥ 0.95
Linear dynamic range	2 × 10 ⁶ total counts
nCounter Prep Station throughput	12 samples < 2.5 hours
nCounter Digital Analyzer throughput	12 samples / 4 hours <i>(up to 96 samples per day unattended running in continuous mode)</i>
Controls	<ul style="list-style-type: none"> • 6 positive miRNA assay controls • 6 negative miRNA assay controls • 4 mRNA housekeeping controls • 3 non-mammalian miRNA spike-in probes

nCounter Master Kit Components

All reagents and consumables required for post-hybridization processing of nCounter Human v2 miRNA assays are supplied in the nCounter Master Kit. Kits for 12, 24, 48 assays are available. Orders for 96 assays will be shipped as two 48 assay Master Kits. Master Kit components include:

- *nCounter Cartridges*
- *nCounter Prep Plates*
- *nCounter Prep Packs*

The nCounter Master Kit components are shipped in separate boxes under different shipping conditions. Individual components may be purchased separately if required.

nCounter Cartridge

Twelve samples can be processed in a single nCounter Cartridge.

Component	Assay Pack	Cartridge per Pack
nCounter Cartridge	12	1
	24	2
	48	4

Storage Conditions: Store for up to 1 year at -20°C.

nCounter Prep Plates

The Prep Plates are foil sealed 96-well plates that are used by the Prep Station. Do not remove the foil seals.

Component	Assay Pack	Plates per Pack
Contains wash buffers, magnetic beads, immobilization, and imaging reagents	12	2
	24	4
	48	8

Storage Conditions: Store for up to 6 months at 4°C.

nCounter Prep Pack

Component	Assay Pack	Units per Pack
Racked tips and foil piercers	12	1 rack
	24	2 racks
	48	4 racks
12-tube strips	12	4 strips
	24	8 strips
	48	14 strips
Tip sheaths	12	2 sheaths
	24	4 sheaths
	48	8 sheaths
12-strip tube caps	12	4 strips
	24	8 strips
	48	14 strips
Cartridge well seals	12	2 seals
	24	3 seals
	48	6 seals
Hybridization buffer	12	1 tube
	24	1 tube
	48	2 tubes

**If hybridization buffer has been stored in cold conditions and precipitate is observed, warm tubes at 37°C until salts have dissolved.*

Storage Conditions: Store at room temperature. No expiration date.

Safety Information

Material Safety Data Sheets are included on the USB drive packaged with the nCounter CodeSets. Safety information for operation of the nCounter System is included in the *nCounter Prep Station User Manual* and the *nCounter Digital Analyzer User Manual*.

Precautions

1. The NanoString nCounter Analysis System and consumables are for **RESEARCH USE ONLY**; not for use in diagnostic procedures.
2. Avoid microbial contamination, which may negatively affect the quality of the results.
3. All biological specimens and materials should be handled as if the potential exists for transmitting infectious agents and disposed of with proper precautions in accordance with federal, state and local regulations. This includes adherence to the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) for samples derived from blood and other sources governed by this act.
4. Never pipet by mouth.
5. Avoid specimen contact with skin and mucous membrane and always wear gloves.
6. Exercise caution when handling and disposing of carcinogenic reagents.
7. Avoid cross-contamination of samples which may negatively affect results quality.

Limited License

Subject to the terms and conditions of the nCounter Analysis System contained in the product quotation, NanoString grants you a limited, non-exclusive, non-transferable, non-sublicensable, research use only license to use the proprietary nCounter Analysis System only in accordance with the manual and other written instructions provided by NanoString. Except as expressly set forth in the terms and conditions, no right or license, whether express, implied or statutory, is granted by NanoString under any intellectual property right owned by, or licensed to, NanoString by virtue of the supply of the proprietary nCounter Analysis System. Without limiting the foregoing, no right or license, whether express, implied or statutory, is granted by NanoString, to use the nCounter Analysis System with any third party product not supplied or licensed to you by NanoString, or recommended for use by NanoString in a manual or other written instruction provided by NanoString.

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