

Equipment, Materials, & Reagents for RNA nCounter Assays on GeoMx™ DSP

See the tables below for information on equipment, materials, and reagents needed for GeoMx RNA slide preparation and nCounter readout preparation. Separate lists are included for manual slide prep and for Leica Biosystems autostainer slide prep. This information is also available under **Support Documents** at www.nanostring.com/GeoMxDSP).

EQUIPMENT

The following pieces of equipment are recommended for the GeoMx DSP workflow but are not provided by NanoString.

Table 1: Equipment not provided by NanoString.

Stage	Equipment	Manufacturer	Part Numbers
General	Baking oven	Quincy Lab, Inc. (or comparable)	Various GC models
	Hybridization oven including hybridization chamber*: Boekel Scientific RapidFISH Slide Hybridizer or	Boekel Scientific	240200 for 120V or 240200-2 for 230V
	HybEZ II Hybridization System <ul style="list-style-type: none"> • HybEZ oven • Humidity control tray • EZ-Batch wash tray • EZ-Batch slide holder • HybEZ humidifying paper (2 sheets) * These hybridization ovens are designed to keep the slides hydrated and maintain a precise temperature overnight. NanoString does not recommend the use of any other hybridization ovens for GeoMx RNA DSP.	ACDBio	321710/321720 310012 321717 321716 310025

Stage	Equipment	Manufacturer	Part Numbers
	Please contact NanoString with any concerns.		
	Water bath (up to at least 37°C)	Various	Various
(optional)	UV Light Box	VWR	Various
MANUAL Slide Prep only	TintoRetriever Pressure Cooker Note: A TintoRetriever Pressure Cooker is recommended for this protocol. Other alternatives may be acceptable, but have not been validated by NanoString and will require optimization. Any model used needs to have a temperature gauge. The TintoRetriever is rated for 110V ; a transformer is required for 220V .	BioSB	BSB 7008
LEICA Slide Prep only	BOND RX or RX ^m Compact, Fully Automated Advanced Stainer	Leica Biosystems	Contact Leica Biosystems
	BOND RX Controller, running BOND RX software version 6.0 and above	Leica Biosystems	Contact Leica Biosystems
nCounter Readout	Vortex	Various	Various
	Picofuge	Various	Various
	ALPS 50 plate sealer (see Materials list (see Table 2) for compatible heat-sealing foil)	Thermo Fisher	AB-1443A
	Heatblock or thermal cycler Note: ensure that this is compatible with hybridization plate used (see the materials list for nCounter Readout on page 4).	Various, such as Bio-Rad C1000 deep-well model	Various, such as 1851197
	Plate spinner/centrifuge (up to at least 2000 g)	Various	Various

MATERIALS

The following materials are recommended for the GeoMx DSP workflow but are not provided by NanoString.

Table 2: Materials not provided by NanoString.

Stage	Materials	Manufacturer	Part Numbers
General	Pipettes for 5–1,000 µL	Various	Various
	12-channel P20 multi-channel pipetter	Various	Various
	Filter Tips (RNase/DNase free)	Various	Various
	Microtubes	Sarstedt (or comparable)	72.785.005
	SuperFrost Plus microscopic slides	Fisher Scientific (or comparable)	12-550-15
	Tissue-Tek Staining Dish (plastic Coplin Jars) or equivalent	Sakura (or comparable)	25608-904 or 25608-906
	Humidity Chamber	Simport	M920-1
	Benchtop protector sheet (fits inside the hyb oven, optional)	Fisher Scientific (or comparable)	15235101
	Hybrislip hybridization covers (22 mm x 40 mm x 0.25 mm) Note: this has been validated by NanoString. Do not use other products.	Grace Biolabs	714022
	RNase AWAY	ThermoFisher	7003PK
MANUAL Slide Prep only	Heat/cold protectant handling glove	Various	Various
LEICA Slide Prep only	BOND Research Detection System (includes 6x 30 mL Open Containers)	Leica Biosystems	DS9455
	BOND Titration Kit	Leica Biosystems	OPT9049

Stage	Materials	Manufacturer	Part Numbers
	(includes 50 inserts)		
	BOND Universal Covertiles	Leica Biosystems	S21.2001
	BOND Open Containers 30 mL (if needed)	Leica Biosystems	OP309700
	BOND Titration Container Inserts (if needed)	Leica Biosystems	OPT9179
nCounter Readout	Permeable membrane (dry-down seal, optional)	Sigma	A9224
	Eppendorf 96-Well twin.tec PCR Plates, semi-skirted, 250 µl or 96-well plate (compatible with most thermocyclers)	Fisher Scientific	Cat. No. E951020346 BC2496
	96 well plate stickers (freezing and storing plates)	Various	Various
	Heat-sealing foil seals	Fisher Scientific	AB-0559

REAGENTS

The following reagents are recommended for the GeoMx DSP workflow but are not provided by NanoString.

Table 3: Reagents not provided by NanoString.

Stage	Reagent	Source/ Part Number	Storage
General	DEPC-treated water	ThermoFisher, AM9922 (or comparable)	RT
	10X phosphate buffered saline pH 7.4 (PBS)	Sigma Aldrich, SKU P5368-10PAK, P5368-5X10PAK (or comparable)	RT
	10% neutral buffered formalin (NBF) 	EMS Diasum, Cat # 15740-04 (or comparable)	RT
	100% deionized formamide 	ThermoFisher, AM9342 or VWR, VWRV0606 (or comparable)	4°C (bring to RT before opening)
	20X SSC (DNase, RNase free)	Sigma Aldrich, S6639	RT
	Proteinase K	Ambion, 2546 , or Thermo Fisher, AM2548 Note: Do not use ProK from other vendors.	-20°C -20°C
	Tris base	Sigma, 10708976001 (or comparable)	RT
	Glycine	Sigma, G7126 (or comparable)	RT
MANUAL Slide Prep only	Citrisolv or Xylene	Fisher Scientific, Cat # 04-355-121 Sigma Aldrich, SKU 183164-	RT

Stage	Reagent	Source/ Part Number	Storage
		100ML or 183164-500ML (or comparable)	
	100% ethanol (EtOH): ACS grade or better	Various	RT
	1X Tris-EDTA	eBioscience™ IHC Antigen Retrieval Solution - High pH, 00-4956-58 (10X - will need to be diluted with DEPC-treated water)	RT
	10% Tween 20	Teknova, T0710 (or comparable)	RT
	Proteinase K	Ambion, 2546 , or Thermo Fisher, AM2548	-20°C
		Note: Do not use ProK from other vendors.	-20°C
LEICA Slide Prep only	BOND Dewax Solution – 1 L	Leica Biosystems, AR9222	4°C or RT
	BOND Epitope Retrieval 2 - 1 L	Leica Biosystems, AR9640	4°C
	BOND Wash Solution 10X Concentrate – 1 L	Leica Biosystems, AR9590	4°C
	Leica Biosystems Enzyme Pretreat Kit (RNA only) or Proteinase K (recommended)	Leica Biosystems, AR9951 Ambion, 2546	4°C -20°C
		Note: Do not use ProK from other vendors.	

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