

AccuLift LCM Portfolio

A Renaissance in Laser Capture Microdissection



A Complete Solution for Genomics and Proteomics Research

The AccuLift[™] laser capture microdissection (LCM) portfolio of products is designed to streamline and improve your LCM workflow.



Proprietary, micro-patterned GeckoGrip[™] Caps ensure highest capture with the help of over 1,000 unique microscopic GeckoGrip feet per square millimeter of cap surface. GeckoGrip Caps can accommodate uneven surfaces by reaching into the valleys and crevasses on tissue to ensure maximum recovery from the targeted area, overcoming the challenges of traditional LCM.

Highlights

Precise—Accurate and gentle capture of samples down to a single-cell level

Simple—Easy, streamlined workflow

Efficient—Novel caps and instrument cap arm that increase lifting efficiency for improved DNA, RNA or protein extraction

Consistent—Cellular biomolecule integrity preserved for the most consistent downstream results

Workflow

Achieve superior results for all your LCM needs with a simplified workflow.



Preparation AccuLift LCM Release Slides improve tissue recovery with each laser pulse, even for challenging tissue sections.



Selection

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The AccuLift System harnesses the power of infrared (IR) and ultraviolet (UV) laser cutting in one unique platform with GeckoGrip Caps and AccuLift Release Slides, enabling superior capture efficiency.



Purification

AccuLift LCM Reagent Kits enable superior recovery of high-quality DNA and RNA from very small quantities.

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Molecular Analysis

AccuLift LCM Reagent Kits enable amplification of nucleic acids.

AccuLift Laser Capture Microdissection System

Two Lasers in One–A Renaissance in Laser Capture Microdissection

The Fluidigm AccuLift System is an unparalleled LCM system that harnesses the power of gentle infrared (IR) laser capture and ultraviolet (UV) laser cutting in one unique platform in combination with a novel suite of cap consumables, extraction reagents and user-friendly software.

The system is designed to meet the needs of biomedical and pathologist researchers to transform digital pathology and accelerate translational and clinical research.



AccuLift Portfolio includes differentiated instruments and consumables developed in collaboration with Dr. Lance Liotta, key inventor of LCM technology, at George Mason University.

Combining Gentle IR Capture and Powerful UV Cutting to Uncover Unique Genomic or Proteomic Signatures from Tissue Samples

The proprietary and patent-pending design of the AccuLift System is designed for routine cellular capture down to single-cell resolution.



Precision

The unique geometric positioning and alignment of the IR capture laser and UV laser create greater resolution, thus permitting smaller capture sizes for single cells and small numbers of cells.



Simplicity

Simplified instrument design with streamlined workflow and user-friendly interface. Easy to use even for first-time user.



Efficiency

Preserve precious samples and maximize tissue recovery. Designed to work with multiple sample inputs and produce sufficient nucleic acids or proteins.



Consistency

Gentle IR laser capture preserves biomolecule integrity for consistent assessment of genomic or proteomic signatures to get to insights that matter.

Technology Spotlight

The AccuLift System uses high-quality Olympus optics. The standard instrument includes 2X, 10X and 40X objectives and a streamlined software interface.

IR Laser: Ultrasensitive, solid-state, near-IR (808 nm) with adjustable power output. Captures single cells and small areas of interest gently and with unparalleled precision. **UV Laser:** Solid-state, diode-pumped passively Q-switched (355 nm) with 20 kHz sub-nanosecond pulse rate. Harvests large number of cells from tissue samples with superior speed.

The AccuLift instrument exhibits highest sensitivity by preserving precious samples and achieving maximum tissue recovery.



AccuLift LCM Release Slides

For Tissue Preparation

Improve tissue recovery with each laser pulse, even for challenging samples including frozen and FFPE tissue sections. AccuLift LCM Release Slides are designed to reduce the attractive force between your slide and your tissue. Unlike ordinary glass slides, which retain a strong attractive force for your tissue sample during microdissection, our proprietary slides are coated with an optically transparent, IR-reflective material that releases your tissue sample as it is microdissected.



AccuLift LCM GeckoGrip Caps

For Cell Selection and Isolation

Designed to overcome the challenges of traditional LCM and compatible with all IR/UV LCM systems. Variation in tissue prevents the entire capturing surface of a traditional LCM cap from contacting the tissue surface. Instead, caps touch only the tissue mountains while failing to contact the valleys. This leads to poor recovery of the targeted tissue area. New AccuLift LCM GeckoGrip Caps can accommodate the uneven tissue surface and reach into the valleys and crevasses on the tissue to overcome this challenge. Each GeckoGrip Cap has over 1,000 unique microscopic GeckoGrip feet per square millimeter of cap surface to maximize tissue recovery.



AccuLift LCM Purification Kits

For Extraction

Extract nucleic acids from laser-microdissected samples using AccuLift purification products that are specially designed to process very small amounts of starting material.

- AccuLift RNA Spin Column Micro Prep Kit: Easy, reliable and rapid isolation of DNA-free RNA from a wide range of cell (up to 10⁶) and tissue samples (up to 5 mg) in 10 minutes
- AccuLift RNA Cleanup and Concentrator Kit: A simple and reliable method for the rapid preparation of up to 10 μ g of high-quality RT-PCR-ready, DNA-free RNA in under 5 minutes
- AccuLift Rapid RNA Extraction Kit for LCM: Fast, simple, single-tube system for preparing RNA for cDNA synthesis



AccuLift LCM Molecular Analysis Kits

For Amplification

Amplify nucleic acids using the AccuLift technologies designed for very small amounts of starting material.

- AccuLift First-Strand cDNA Synthesis Kit: Amplifying mRNA for significantly improved qRT-PCR
- AccuLift Ultra-sensitive RNA Amplification Kit for LCM: Amplifying mRNA (polyadenylated RNA) directly from the cell lysates without the need for isolating total cellular RNA

System Specifications

Feature	Details	Standard	Options*
Microscope	Olympus ix73 microscope base	\checkmark	
	Standard microscope operation outside of LCM operating software	\checkmark	
Laser	Infrared (IR) capture laser: Solid-state, near-IR (808 nm) with adjustable power output	\checkmark	
	UV laser: Solid-state, diode-pumped passively Q-switched (355 nm) with 20kHz sub-nanosecond pulse rate		\checkmark
Illumination	5W 24-LED illumination ring	\checkmark	
Objectives	2X, 10X and 40X Olympus PLAPON; PLAN APO objectives	\checkmark	
	4X, 20X, 60X and 100X dry		\checkmark
Epi-fluorescence	2,000-hour broad-spectrum metal halide lamp; user-replaceable with no alignment required. Six-position fluorescence filter turret with 3 filter cubes (R, G, B) and 3 available positions for application-specific filter cubes.		\checkmark
Stage	Motorized, joystick- or software-actuated in X- and Y-axes with 0.25 μm homing accuracy and 0.25 μm bidirectional reproducibility for autonomous microdissection. Click-and-walk technology.	\checkmark	
Contrast methods	Bright field	\checkmark	
Microdissection camera	Color CMOS camera with large field of view and high resolution (5MP), low noise, frame rate of 75 fps at the full 5MP resolution	~	

* All options are field-upgradable for later installation.

Ordering Information

System	Product Number
AccuLift [™] Skywalker LCM System–IR	10150
AccuLift Yoda LCM System–UV and IR	10151
AccuLift UV Laser Upgrade	10155







Номер подключен на сетях операторов МТС, Билайн, Мегафон и Теле2

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Consumables	Quantity	Product Number	
AccuLift™ LCM GeckoGrip™ Caps	24 pack	10004	
AccuLift LCM Release Slides	10 pack	10005	
AccuLift Rapid RNA Extraction Kit for LCM	50 samples	10006	
AccuLift Ultra-sensitive RNA Amplification Kit for LCM	10 samples	10007	
AccuLift First-Strand cDNA Synthesis Kit	50 samples	10008	
AccuLift RNA Spin Column Micro Prep Kit	50 samples	10010	
AccuLift DNA FFPE/Frozen Extraction Micro Prep Kit	50 samples	10011	
AccuLift RNA Cleanup and Concentrator Kit	50 samples	10012	

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