

A D V A N C E D   S T A I N I N G   R E A G E N T S

# NOVOCASTRA

EXTENSIVELY TESTED, IHC ANTIBODIES AND REAGENTS



Advancing Cancer Diagnostics  
Improving Lives

**Leica**  
BIO SYSTEMS



A D V A N C E D   S T A I N I N G   R E A G E N T S  
N O V O C A S T R A   P R I M A R Y   A N T I B O D I E S

# STAINING QUALITY ISN'T AN OPTION



**IT'S AN  
ESSENTIAL  
REQUIREMENT**

# NOVOCASTRA IHC REAGENT SOLUTION

Behind every sample in your laboratory there is a patient needing answers. They are anxiously waiting for life-changing results. They rely on your quality for an accurate diagnosis. They depend on your efficiency to avoid delays. And they hope for increased speed to get critical answers, and start vital treatment, sooner.

Novocastra delivers a range of reagent solutions to suit your needs: IHC antibodies, detection systems and ancillary reagents designed for both fully automated and manual workflows, all to help you deliver high quality and reliable staining that supports patient care.



## IT'S YOUR CHOICE

### Robust Antibodies

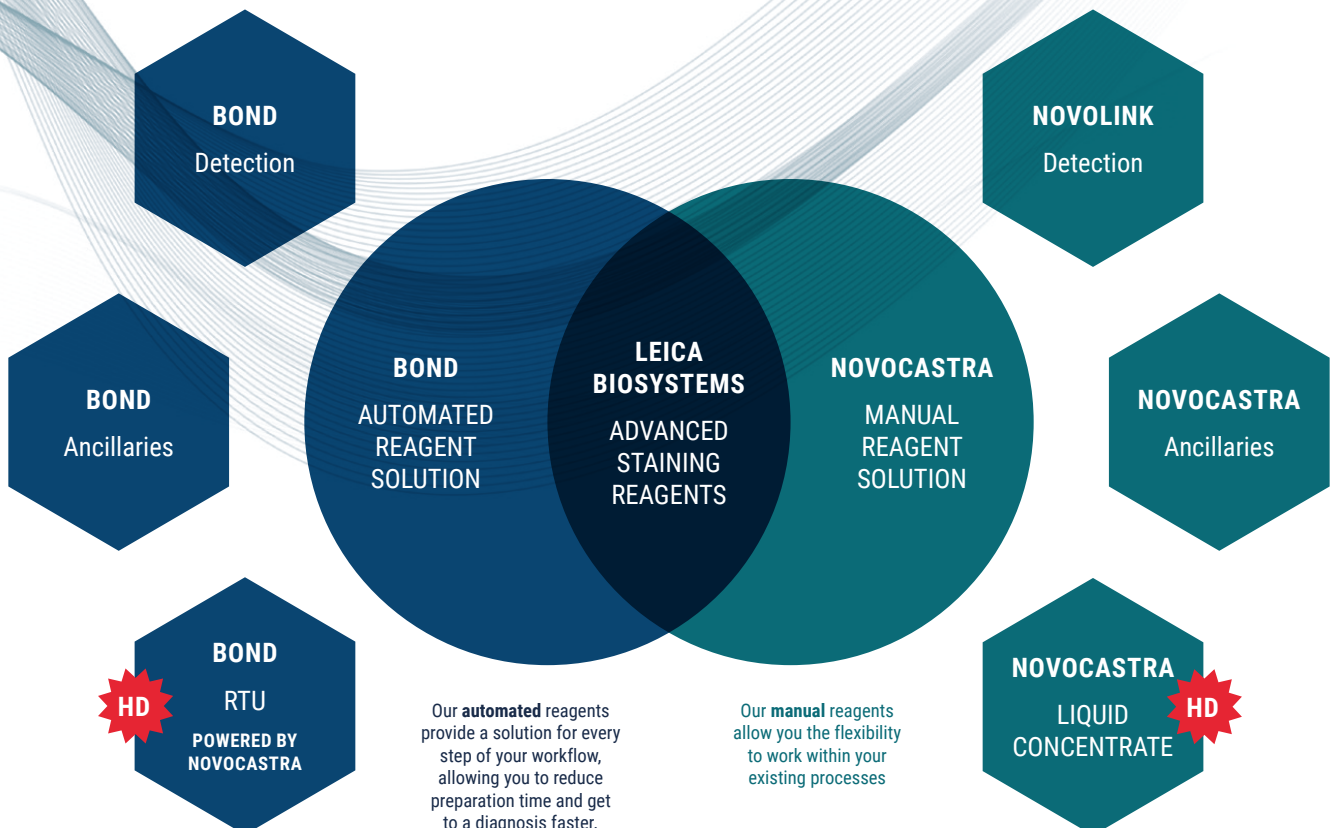
In-house development ensures high quality real-world performance.

### Automated Detection

Compact Polymer technology with small multifunctional linkers to enhance tissue penetration for visualization.

### A Complete System

Antibodies, diluent and detection all working together.





# NOVOCASTRA ANTIBODIES

<b>Br</b> BREAST PATHOLOGY	<b>De</b> DERMATOPATHOLOGY	<b>Ga</b> GASTROINTESTINAL PATHOLOGY	<b>Gy</b> GYNEPATHOLOGY	<b>HNE</b> HEAD, NECK AND ENDOCRINE PATHOLOGY	<b>He</b> HEMATOPATHOLOGY	<b>IO</b> IMMUNO-ONCOLOGY
<b>Lu</b> LUNG PATHOLOGY	<b>MP</b> MUSCLE PATHOLOGY	<b>Ne</b> NEUROPATHOLOGY	<b>ST</b> SOFT TISSUE PATHOLOGY	<b>Sp</b> SPECIALIZED	<b>TD</b> TUMOR DIFFERENTIATION	<b>Ur</b> UROPATHOLOGY

Spanning across 14 pathologies, Leica Biosystems offers laboratories a comprehensive range of clinically relevant antibodies which can satisfy the demand for the most demanding workload. The Novocastra range of antibodies aims to provide labs with high quality, reliable staining that supports optimal patient care.

## A COMPREHENSIVE RANGE OF FORMATS

Novocastra HD introduces a comprehensive range of formats and sizes of antibodies from Leica Biosystems, making it easy for you to align the right products to your case-load and format preferences. The Novocastra range includes an extended range of liquid concentrates, and BOND Ready-to-Use products optimized for use on the fully-automated BOND staining platforms.

### NOVOCASTRA BOND RTU

BOND Ready-to-Use antibodies are optimized to deliver high quality staining results on BOND systems. This format eliminates variability in antibody preparation, reducing hands-on time. Pre-optimized reagents and automated protocols deliver consistent results you can rely on.



### NOVOCASTRA LIQUID CONCENTRATES

The Novocastra liquid concentrated antibody range is an extensive collection of primary antibodies for IHC testing. Concentrated antibodies afford workflow flexibility, enabling users to optimize their protocols according to their pre-analytical conditions.





# NOVOCASTRA HD

We analyzed over 80,000 points of data from laboratories and pathologists world-wide, to provide a range of antibodies designed for your IHC needs.

With an ever increasing choice of antibodies in the market, selecting the right products that deliver the performance you demand is not always straightforward. Novocastra HD antibodies are Novocastra antibodies which have been independently evaluated<sup>1</sup> by external QA, NordiQC, in comparison with equivalent products from other vendors. The Novocastra HD range is comprised of the most clinically relevant clones designed to deliver quality, regardless of which antibody is selected by the Pathologist.

## INDEPENDENTLY BENCHMARKED FOR RESULTS YOU CAN RELY ON

The Novocastra HD BOND RTU range, utilizing BOND Detection and the BOND-III, provides pathologists with an entire solution, optimized and designed to deliver superior staining up to 40% faster than other IHC systems. NordiQC defines staining performance as either Optimal, Good and Borderline:

### OPTIMAL STAINING

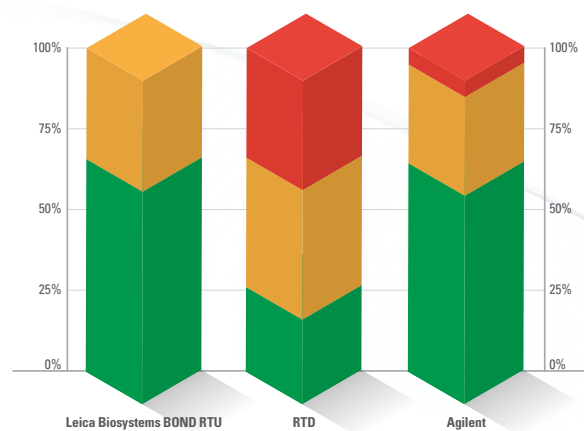
Staining considered perfect or close to.

### GOOD STAINING

Staining is considered fully acceptable. However, the protocol may be optimized to ensure the best staining intensity and signal-to-noise ratio.

### BORDERLINE STAINING

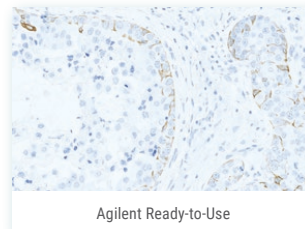
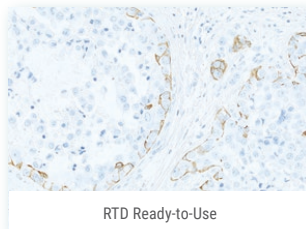
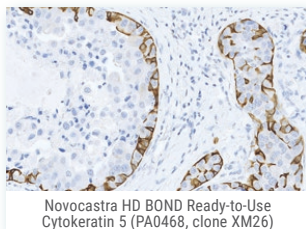
Staining is considered insufficient, eg, because of a generally too weak staining or a false negative or false positive staining reaction. The protocol should be optimized.



Graph shows the % of RTU antibodies per vendor within each staining category as defined by NordiQC.

## CYTOKERATIN 5

A comparison of CK5 Ready-to-Use antibodies from leading manufacturers on human breast cancer, ductal carcinoma in situ.

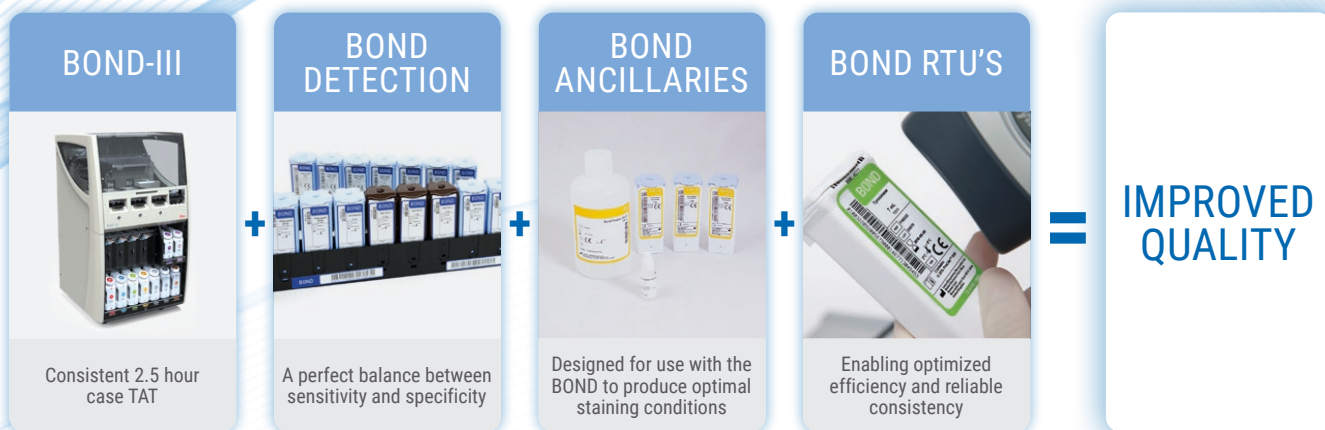


BOND system, using BOND Ready-to-Use Cytokeratin 5, demonstrates high quality staining when compared directly to Ready-to-Use antibodies from other leading manufacturers on serially cut sections of human breast cancer; ductal carcinoma in situ. Images supplied by NordiQC.

# AUTOMATED IHC

## A FULLY INTEGRATED, AUTOMATION SOLUTION

Designed and optimized to work together, the BOND platform coupled with the BOND detection systems, BOND ancillaries and Novocastra BOND RTU's provide the diagnostic confidence that pathologist's expect and the optimized efficiency lab's demand.



### BOND DETECTION SYSTEMS

<p><b>BOND POLYMER REFINE DETECTION</b></p> <p>A biotin-free, state-of-the-art compact Polymer horseradish peroxidase (HRP) detection systems Provides intense, high resolution staining.</p>	<p><b>BOND POLYMER REFINE RED DETECTION</b></p> <p>A biotin-free alkaline phosphatase (AP)-linked compact polymer provides enhanced tissue penetration for optimal staining quality.</p>	<p><b>CHROMPLEX 1 DUAL DETECTION FOR BOND</b></p> <p>A one step parallel staining detection system with two distinctive chromogens (red and brown) on a single slide to give a faster, more comprehensive result for clinical assessment.</p>
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### BOND ANCILLARIES

BOND DEWAX SOLUTION	BOND WASH SOLUTION	BOND EPI TOPE RETRIEVAL SOLUTION
BOND PRIMARY ANTIBODY DILUENT	BOND ENZYME PRETREATMENT KIT	BOND DAB ENHANCER
ANTI-FLUORESC EIN ANTIBODY	ANTI-BIOTIN ANTIBODY	BOND UNIVERSAL COVERTILE



# MANUAL IHC

## NOVOLINK DETECTION SYSTEMS

The Novolink Polymer Detection Systems utilize a Compact Polymer technology. Therefore, the problem of non-specific staining that can occur with Streptavidin/Biotin detection systems due to endogenous biotin does not occur. Novolink Polymer Detection Systems contain pre-diluted, reagents in color coded bottles for ease of use and ultimate convenience.



### NOVOLINK MAX POLYMER DETECTION SYSTEM

1250 Tests

### NOVOLINK POLYMER DETECTION SYSTEM

250 or 500 Tests

### NOVOLINK MIN POLYMER DETECTION SYSTEM

50 Tests

PEROXIDASE  
BLOCK

PROTEIN  
BLOCK

HEMATOXYLIN

NOVOLINK  
POLYMER

NOVOLINK DAB  
(POLYMER)

## NOVOCASTRA DETECTION ANCILLARIES

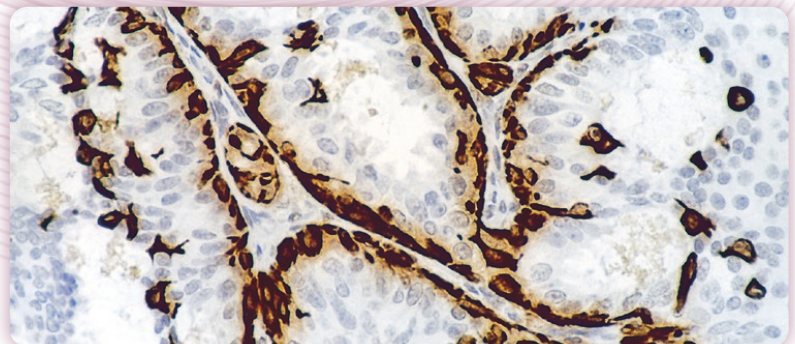
ANTIBODY DILUENT

ENZYME  
PROTEINASE K (IHC)

EPI TOPE RETRIEVAL  
SOLUTIONS PH6

EPI TOPE RETRIEVAL  
SOLUTIONS PH8

EPI TOPE RETRIEVAL  
SOLUTIONS PH9



Novolink Polymer Detection System (RE7150-K) staining for Cytokeratin 5 with NCL-L-CK5 on breast carcinoma (paraffin section)

ADVANCED STAINING REAGENTS  
NOVOCASTRA PRIMARY ANTIBODIES

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Akt (Phosphorylated)	LP18	NCL-L-AKT-Phos			1 mL						SPECIALIZED
Androgen Receptor	AR27	NCL-L-AR-318			1 mL						UROPATHOLOGY
ALK	5A4	PA0831	HD					7 mL			LUNG PATHOLOGY
ALK	5A4	NCL-L-ALK	HD	0.5 mL							HEMATOPATHOLOGY
Alpha Fetoprotein	C3	NCL-L-AFP			1 mL						GYNEPATHOLOGY
		PA0963						7 mL			
Alpha-Methylacyl-CoA Racemase (AMACR, p504s)	EPMU1	NCL-L-AMACR			1 mL						UROPATHOLOGY
		PA0210						7 mL			
Alpha-Synuclein	KM51	NCL-L-ASYN			1 mL						NEUROPATHOLOGY
AUropathologyra Kinase 2	JLM28	NCL-L-AK2			1 mL						SPECIALIZED
B Cell Specific Octamer Binding Protein-1 (BOB-1)	TG14	NCL-L-BOB-1			1 mL						HEMATOPATHOLOGY
		PA0558						7 mL			
Bcl-2 Oncoprotein	bcl-2/100/D5	NCL-L-bcl-2	HD		1 mL						HEMATOPATHOLOGY
		PA0117	HD					7 mL			
Bcl-6 Oncoprotein	LN22	NCL-L-Bcl-6-564	HD		1 mL						HEMATOPATHOLOGY
		PA0204	HD					7 mL			
Beta-Catenin	17C2	NCL-L-B-CAT			1 mL						SOFT TISSUE PATHOLOGY
		PA0083						7 mL			
Beta-Dystroglycan	43DAG1/8D5	NCL-b-DG			1 mL						MUSCLE PATHOLOGY
c-erbB-2 Oncoprotein (HER-2) Antibodies	CB11	NCL-L-CB11			1 mL						BREAST PATHOLOGY
		PA0983						7 mL			
	PA0571							13.5 mL			
CA19-9 (Sialyl Lewis a)	C241:5:1:4	NCL-L-CA19-9			1 mL						GASTROINTESTINAL PATHOLOGY
		PA0424						7 mL			
CA125 (Ovarian Cancer Antigen)	Ov185:1	NCL-L-CA125	HD		1 mL						GYNEPATHOLOGY
		PA0539	HD					7 mL			
Calcitonin	CL1948	NCL-L-CALCITONIN			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0406						7 mL			
Calpain Antibodies	Calp3c/12A2	NCL-CALP-12A2					2.5 mL				MUSCLE PATHOLOGY
	Calp3d/2C4	NCL-CALP-2C4					2.5 mL				
Calponin (Basic)	26A11	PA0416						7 mL			MUSCLE PATHOLOGY
Calretinin	CAL6	NCL-L-CALRET-566	HD		1 mL						LUNG PATHOLOGY
		PA0346	HD					7 mL			
Carbonic Anhydrase IX	TH22	NCL-L-CAIX			1 mL						UROPATHOLOGY
Carcinoembryonic Antigen (CD66e)	COL-1	NCL-L-CEA-609	HD		1 mL						GASTROINTESTINAL PATHOLOGY
		PA0848	HD					7 mL			
	12-140-10	NCL-L-CEA-2			1 mL						
Caveolin-1	4D6	NCL-L-Caveolin-1			1 mL						SPECIALIZED
CD1a	MTB1	NCL-L-CD1a-235	HD		1 mL						DERMATOPATHOLOGY
		PA0235	HD					7 mL			
CD2 (LFA-2)	11F11	PA0271						7 mL			HEMATOPATHOLOGY
	AB75	NCL-L-CD2-271			1 mL						
CD3	LN10	NCL-L-CD3-565	HD		1 mL						HEMATOPATHOLOGY
		PA0553	HD					7 mL			
		PA0122	HD							30 mL	

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IVD/CE labelled Class I antibodies are recommended for the detection of specific antigens related to the antibody in normal and neoplastic tissues, as an adjunct to conventional histopathology using non-immunologic histochemical stains.



A D V A N C E D      S T A I N I N G      R E A G E N T S  
N O V O C A S T R A      P R I M A R Y      A N T I B O D I E S

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
CD4	4B12	NCL-L-CD4-368	HD		1 mL						HEMATOPATHOLOGY
		PA0427	HD					7 mL			
CD5	4C7	NCL-L-CD5-4C7	HD		1 mL						HEMATOPATHOLOGY
		PA0168	HD					7 mL			
CD7	LP15	NCL-L-CD7-580	HD		1 mL						HEMATOPATHOLOGY
		PA0266	HD					7 mL			
CD8	4B11	NCL-L-CD8-4B11	HD		1 mL						HEMATOPATHOLOGY
		PA0183	HD					7 mL			
CD10	56C6	NCL-L-CD10-270	HD		1 mL						HEMATOPATHOLOGY
		PA0270	HD					7 mL			
		PA0131	HD							30 mL	
CD11c	5D11	NCL-L-CD11c-563	HD		1 mL						HEMATOPATHOLOGY
		PA0554	HD					7 mL			
CD13	38C12	NCL-L-CD13-304			1 mL						HEMATOPATHOLOGY
		PA0304						7 mL			
CD15	MMA	NCL-L-CD15-605	HD		1 mL						HEMATOPATHOLOGY
		PA0473						7 mL			
CD16	2H7	NCL-L-CD16			1 mL						HEMATOPATHOLOGY
CD19	BT51E	NCL-L-CD19-163	HD		1 mL						HEMATOPATHOLOGY
		PA0843	HD					7 mL			
CD20	L26	NCL-L-CD20-L26	HD		1 mL						HEMATOPATHOLOGY
		PA0200	HD					7 mL			
		PA0359	HD							30 mL	
CD21	2G9	NCL-L-CD21-2G9			1 mL						HEMATOPATHOLOGY
		PA0171						7 mL			
CD22	FPC1	PA0249						7 mL			HEMATOPATHOLOGY
CD23	1B12	NCL-L-CD23-1B12	HD		1 mL						HEMATOPATHOLOGY
		PA0169	HD					7 mL			
CD25	4C9	PA0305						7 mL			HEMATOPATHOLOGY
CD30	JCM182	NCL-L-CD30-591			1 mL						HEMATOPATHOLOGY
		PA0790						7 mL			
CD31 (PECAM-1)	JC70A	NCL-L-CD31-607	HD		1 mL						SOFT TISSUE PATHOLOGY
		PA0414	HD					7 mL			
	1A10	PA0250						7 mL			
CD33	PWS44	NCL-L-CD33	HD		1 mL						HEMATOPATHOLOGY
		PA0555	HD					7 mL			
CD34 (Endothelial Cell Marker)	QBEnd/10	NCL-L-END	HD	0.5 mL	1 mL						SOFT TISSUE PATHOLOGY
		PA0212	HD					7 mL			
		PA0354	HD							30 mL	
CD38	SPC32	NCL-L-CD38-290			1 mL						HEMATOPATHOLOGY
CD43	MT1	NCL-L-MT1			1 mL						HEMATOPATHOLOGY
		PA0938						7 mL			
CD45	X16/99	NCL-L-LCA	HD		1 mL						HEMATOPATHOLOGY
		PA0042	HD					7 mL			
CD45RO	UCHL1	NCL-L-UCHL1			1 mL						HEMATOPATHOLOGY
		PA0146						7 mL			

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N O V O C A S T R A      P R I M A R Y      A N T I B O D I E S

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
CD56 (NCAM)	CD564	NCL-L-CD56-504	HD		1 mL						HEMATOPATHOLOGY
		PA0191	HD					7 mL			HEMATOPATHOLOGY
CD57	NK-1	PA0443						7 mL			HEMATOPATHOLOGY
CD61 (GPIIIa)	2f2	PA0308						7 mL			HEMATOPATHOLOGY
CD68	514H12	NCL-L-CD68	HD		1 mL						HEMATOPATHOLOGY
		PA0273	HD					7 mL			HEMATOPATHOLOGY
CD71	10F11	NCL-L-CD71-309			1 mL						SPECIALIZED
CD79a	JCB117	NCL-L-CD79a-599	HD		1 mL						HEMATOPATHOLOGY
		PA0599						7 mL			HEMATOPATHOLOGY
CD79b	JS01	NCL-L-CD79b			1 mL						HEMATOPATHOLOGY
CD99	PCB1	NCL-L-CD99-187	HD		1 mL						SOFT TISSUE PATHOLOGY
CD103	EP206	PA0374						7 mL			HEMATOPATHOLOGY
CD117	EP10	NCL-L-CD117-032	HD		1 mL						GASTROINTESTINAL PATHOLOGY
		PA0007	HD					7 mL			
	T595	NCL-L-CD117			1 mL						HEMATOPATHOLOGY
CD123	BR4MS	NCL-L-CD123			1 mL						HEMATOPATHOLOGY
CD138 (Syndecan 1)	MI15	PA0088	HD					7 mL			HEMATOPATHOLOGY
CD141 (Thrombomodulin)	15C8	NCL-L-CD141			1 mL						SPECIALIZED
CD146 (MCAM)	N1238	NCL-L-CD146			1 mL						DERMATOPATHOLOGY
CD163	10D6	NCL-L-CD163	HD		1 mL						HEMATOPATHOLOGY
		PA0090	HD					7 mL			HEMATOPATHOLOGY
CDX2	EP25	PA0375	HD					7 mL			GASTROINTESTINAL PATHOLOGY
Chromogranin A	5H7	NCL-L-CHROM-430	HD		1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0515	HD					7 mL			IMMUNO ONCOLOGY
CTLA-4	CAL49	PA0181						7 mL			HEMATOPATHOLOGY
Cyclin D1	EP12	PA0046	HD					7 mL			HEMATOPATHOLOGY
	P2D11F11	NCL-L-CYCLIND1-GM			1 mL						UROPATHOLOGY
Cytokeratin 5	XM26	NCL-L-CK5	HD		1 mL						TUMOR DIFFERENTIATION
		PA0468	HD					7 mL			SPECIALIZED
Cytokeratin 7	RN7	NCL-L-CK7-560	HD		1 mL						TUMOR DIFFERENTIATION
		PA0942	HD					7 mL			SPECIALIZED
	PA0138	HD							30 mL		TUMOR DIFFERENTIATION
Cytokeratin 8	TS1	NCL-L-CK8-TS1			1 mL						SPECIALIZED
		PA0567						7 mL			TUMOR DIFFERENTIATION
Cytokeratin 14	LL002	NCL-L-LL002	HD		1 mL						TUMOR DIFFERENTIATION
		PA0074	HD					7 mL			TUMOR DIFFERENTIATION
Cytokeratin 17	E3	NCL-L-CK17			1 mL						TUMOR DIFFERENTIATION
		PA0114						7 mL			SPECIALIZED
Cytokeratin 18	DC-10	NCL-L-CK18			1 mL						SPECIALIZED
Cytokeratin 19	b170	NCL-L-CK19			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0799						7 mL			HEMATOPATHOLOGY

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ADVANCED STAINING REAGENTS  
NOVOCASTRA PRIMARY ANTIBODIES

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Cytokeratin 20	Ks20.8	NCL-L-CK20	HD		1 mL						TUMOR DIFFERENTIATION
		PA0022	HD					7 mL			
		PA0037	HD							30 mL	
Cytokeratin (5/6/18)	LP34	NCL-L-LP34			1 mL						UROPATHOLOGY
Cytokeratin (8/18)	5D3	NCL-L-5D3			1 mL						TUMOR DIFFERENTIATION
		PA0067						7 mL			
Cytokeratin, Multi (1/5/10/14)	34BetaE12	PA0134						7 mL			TUMOR DIFFERENTIATION
Cytokeratin, Multi (4/5/6/8/10/13/18)	C-11	NCL-L-C11			1 mL						TUMOR DIFFERENTIATION
Cytokeratin, Multi (5/6/8/18)	5D3/LP34	NCL-L-CK5/6/8/18			1 mL						TUMOR DIFFERENTIATION
Cytokeratin, Multi (AE1/AE3)	AE1/AE3 (Previous Formulation)	PA0094						7 mL			TUMOR DIFFERENTIATION
		NCL-L-AE1/AE3	HD		1 mL						
		PA0909	HD					7 mL			
Desmin	DE-R-11	NCL-L-DES-DERII	HD		1 mL						SOFT TISSUE PATHOLOGY
		PA0032	HD					7 mL			
DOG-1	K9	NCL-L-DOG-1	HD		1 mL						GASTROINTESTINAL PATHOLOGY
		PA0219	HD					7 mL			
Dysferlin Antibodies	Ham1/7B6	NCL-HAMLET			1 mL						MUSCLE PATHOLOGY
	Ham3/17B2	NCL-HAMLET-2			1 mL						
Dystrophin Antibodies	DYSA: clone 13H6	NCL-DYSA			1 mL						MUSCLE PATHOLOGY
	DYSB: clone 34C5	NCL-DYSB			1 mL						
	DYS1: clone Dy4/6D3	NCL-DYS1			1 mL						
	DYS2: clone DY8/6C5	NCL-DYS2			1 mL						
	DYS3: clone DY10/12B2	NCL-DYS3			1 mL						
E-Cadherin	36B5	NCL-L-E-Cad	HD	0.5 mL	1 mL						BREAST PATHOLOGY
		PA0387	HD					7 mL			
Emerin	4G5	NCL-EMERIN			1 mL						MUSCLE PATHOLOGY
Epidermal Growth Factor Receptor	EGFR.113	NCL-L-EGFR	HD		1 mL						LUNG PATHOLOGY
Epithelial Membrane Antigen	GP1.4	NCL-L-EMA			1 mL						TUMOR DIFFERENTIATION
		PA0035						7 mL			
Estrogen Receptor	6F11	NCL-L-ER-6F11	HD		1 mL						BREAST PATHOLOGY
		NCL-L-ER-6F11/2	HD			2 mL					
		PA0151	HD					7 mL			
		PA0009	HD							30 mL	
EZH2 (Enhancer of Zeste Homolog 2 (Drosophila))	6A10	NCL-L-EZH2			1 mL						SPECIALIZED
		PA0575						7 mL			
Factor XIIIa (Blood Coagulation Factor XIIIa)	E980.1	NCL-L-FXIIIa			1 mL						SPECIALIZED
		PA0449						7 mL			
Fascin	IM20	NCL-L-FASCIN			1 mL						HEMATOPATHOLOGY
		PA0420						7 mL			
Folate Receptor Alpha	BN3.2	NCL-L-FRalpha			1 mL						SPECIALIZED
FOXP3	236A/E7	PA0263						7 mL			IMMUNO ONCOLOGY
Galectin-3	9C4	PA0238						7 mL			BREAST PATHOLOGY
Gastrin	Polyclonal	PA0681						7 mL			GASTROINTESTINAL PATHOLOGY
Geminin	EM6	NCL-L-Geminin			1 mL						SPECIALIZED

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ADVANCED STAINING REAGENTS  
NOVOCASTRA PRIMARY ANTIBODIES

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Glial Fibrillary Acidic Protein	GA5	NCL-L-GFAP-GA5	HD		1 mL						NEUROPATHOLOGY
		PA0026	HD					7 mL			
Glutathione S-Transferase (GST) Antibody	LW29	NCL-L-GSTpi-438			1 mL						SPECIALIZED
Granzyme B	11F1	NCL-L-GRAN-B			1 mL						HEMATOPATHOLOGY
		PA0291						7 mL			
Gross Cystic Disease Fluid Protein-15	23A3	NCL-L-GCDFP15	HD		1 mL						BREAST PATHOLOGY
		PA0708	HD					7 mL			
Helicobacter pylori	Polyclonal	IHC5994-A						7 mL			GASTROINTESTINAL PATHOLOGY
	ULC3R	NCL-L-HPYLORI	HD		1 mL						
Human Chorionic Gonadotrophin (beta)	Polyclonal	PA0014						7 mL			GYNEPATHOLOGY
Human Follicle Stimulating Hormone (beta 2) (HFSH)	INN-hFSH-60	PA0693						7 mL			HEAD, NECK AND ENDOCRINE PATHOLOGY
Human Growth Hormone (HGH)	Polyclonal	PA0704						7 mL			HEAD, NECK AND ENDOCRINE PATHOLOGY
Human Herpesvirus 8 (HHV8)	13B10	NCL-L-HHV8-LNA			1 mL						DERMATOPATHOLOGY
		PA0050						7 mL			
Immunoglobulin A	N1CLA	NCL-L-IgA	HD		1 mL						HEMATOPATHOLOGY
Immunoglobulin D	DRN1C	NCL-L-IgD	HD		1 mL						HEMATOPATHOLOGY
		PA0061	HD					7 mL			
Immunoglobulin G	RWP49	NCL-L-IgG	HD		1 mL						HEMATOPATHOLOGY
		PA0905	HD					7 mL			
Immunoglobulin M	8H6	NCL-L-IgM	HD		1 mL						HEMATOPATHOLOGY
		PA0278	HD					7 mL			
Inhibin Alpha	R1	PA0488						7 mL			GYNEPATHOLOGY
	AMY82	NCL-L-InhibinA			1 mL						
Insulin	2D11-H5	NCL-L-INSULIN			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0620						7 mL			
Interleukin 6	10C12	NCL-L-IL6			1 mL						HEMATOPATHOLOGY
Kappa Light Chain	CH15	NCL-L-KAP-581	HD	0.5 mL	1 mL						HEMATOPATHOLOGY
		PA0606	HD					7 mL			
Ki67 Antigen	MM1	NCL-L-KI67-MM1	HD		1 mL						BREAST PATHOLOGY
		PA0118	HD					7 mL			
		PA0410	HD							30 mL	
	K2	ACK02			1 mL						
		PA0230						7 mL			
LAG-3	12H6	PA0300						7 mL			IMMUNO ONCOLOGY
Lambda Light Chain	SHL53	NCL-L-LAM-578	HD	0.5 mL	1 mL						HEMATOPATHOLOGY
		PA0570	HD					7 mL			
Langerin	12D6	NCL-L-LANGERIN			1 mL						SPECIALIZED
Lysozyme (Muramidase)	Polyclonal	PA0391						7 mL			HEMATOPATHOLOGY
Mammaglobin	EP249	PA0378						7 mL			BREAST PATHOLOGY
Mast Cell Tryptase	10D11	NCL-L-MCTryp-428			1 mL						HEMATOPATHOLOGY
		PA0019						7 mL			
Melan A	A103	NCL-L-MELANA	HD		1 mL						DERMATOPATHOLOGY
		PA0233	HD					7 mL			
		PA0044	HD							30 mL	

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ADVANCED STAINING REAGENTS  
NOVOCASTRA PRIMARY ANTIBODIES

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Melanoma Marker (HMB45)	HMB45	NCL-L-HMB45	HD		1 mL						DERMATOPATHOLOGY
		PA0027	HD				7 mL				
		PA0625	HD						30 mL		
Merosin Laminin Alpha 2 Chain	Mer3/22B2	NCL-MEROSIN			1 mL						MUSCLE PATHOLOGY
Mesothelin	5B2	NCL-L-MESO			1 mL						LUNG PATHOLOGY
		PA0373					7 mL				
Microphthalmia Transcription Factor (MITF)	34CA5	NCL-L-MITF			1 mL						DERMATOPATHOLOGY
Mismatch Repair Protein (MLH1)	ES05	NCL-L-MLH1	HD		1 mL						GASTROINTESTINAL PATHOLOGY
		PA0988	HD					7 mL			
Mismatch Repair Protein (MSH2)	79H11	NCL-L-MSH2-612	HD		1 mL						GASTROINTESTINAL PATHOLOGY
		PA0989	HD					7 mL			
Mismatch Repair Protein (MSH6)	EP49	PA0990	HD					7 mL			GASTROINTESTINAL PATHOLOGY
	PU29	NCL-L-MSH6	HD		1 mL						
Mismatch Repair Protein (PMS2)	EP51	PA0991	HD					7 mL			GASTROINTESTINAL PATHOLOGY
	M0R4G	NCL-L-PMS2	HD		1 mL						
Muc-1 Glycoprotein	Ma695	PA0051						7 mL			GASTROINTESTINAL PATHOLOGY
Muc-2 Glycoprotein	Ccp58	PA0155						7 mL			GASTROINTESTINAL PATHOLOGY
Muc-4 Glycoprotein	EPR9308	PA0444						7 mL			GASTROINTESTINAL PATHOLOGY
Muc-5AC Glycoprotein	CLH2	PA0052						7 mL			GASTROINTESTINAL PATHOLOGY
Muc-6 Glycoprotein	CLH5	PA0053						7 mL			GASTROINTESTINAL PATHOLOGY
Multiple Myeloma Oncogene 1 (MUM-1)	EAU32	NCL-L-MUM1	HD		1 mL						HEMATOPATHOLOGY
		PA0129	HD					7 mL			
Muscle Pathology Specific Actin	HHF35	NCL-L-MSA			1 mL						MUSCLE PATHOLOGY
		PA0258					7 mL				
		SC28	NCL-L-MSA-594			1 mL					
Myeloperoxidase	59A5	NCL-L-MYELO			1 mL						HEMATOPATHOLOGY
		PA0491					7 mL				
MyoD1 (Rhabdomyosarcoma)	5.8A	NCL-L-MyoD1			1 mL						MUSCLE PATHOLOGY
Myogenin (Myf-4)	LO26	NCL-L-Myf-4			1 mL						MUSCLE PATHOLOGY
		PA0226					7 mL				
Myoglobin	MY018	PA0727						7 mL			MUSCLE PATHOLOGY
Myosin Heavy Chain Antibodies	Smooth Muscle Pathology: clone S131	PA0493						7 mL			MUSCLE PATHOLOGY
	Developmental: clone RNMy2/9D2	NCL-MHCd			1 mL						
	Fast: clone WB-MHCf	NCL-MHCf			1 mL						
	WB-MHCN	NCL-MHCn			1 mL						
	WB-MHCS	NCL-MHCs			1 mL						
Myotilin	RS034	NCL-MYOTILIN			1 mL						MUSCLE PATHOLOGY
Napsin A	IP64	NCL-L-NAPSINA	HD		1 mL						LUNG PATHOLOGY
		PA0064	HD					7 mL			
Neuropathologyfilament 200kD	N52.1.7	NCL-L-NF200-N52	HD		1 mL						NEUROPATHOLOGY
		PA0371	HD					7 mL			
Neuropathologyneuropathology Specific Enolase	22C9	PA0435						7 mL			NEUROPATHOLOGY

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ADVANCED STAINING REAGENTS  
NOVOCASTRA PRIMARY ANTIBODIES

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				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Nitric Oxide Synthase 1	NOS-125	NCL-L-NOS-1			1 mL						NEUROPATHOLOGY
Oct-2	Oct-207	PA0532						7 mL			HEMATOPATHOLOGY
Oct-3/4	N1NK	NCL-L-Oct3/4	HD		1 mL						GYNEPATHOLOGY
		PA0193	HD					7 mL			
	N1NK (Previous Formulation)	PA0934	HD					7 mL			
Osteopontin	OP3N	NCL-L-O-PONTIN			1 mL						SPECIALIZED
p16	6H12	PA0016	HD					7 mL			HEAD, NECK AND ENDOCRINE PATHOLOGY
p21 (WAF1 Protein)	4D10	NCL-L-WAF-1			1 mL						SPECIALIZED
p40	BC28	PA0163	HD								LUNG PATHOLOGY
p53 Protein	DO-7	NCL-L-p53-D07	HD		1 mL						BREAST PATHOLOGY
		PA0057	HD					7 mL			
p53 Protein (CM5)	Polyclonal	NCL-L-p53-CM5p		0.5 mL							SPECIALIZED
p57 Protein (Kip2)	25B2	NCL-L-p57			1 mL						SPECIALIZED
p63 Protein	7JUL	NCL-L-p63	HD		1 mL						UROPATHOLOGY
		PA0103	HD					7 mL			
p120 Catenin	EP66	PA0379						7 mL			BREAST PATHOLOGY
Parathyroid Hormone (PTH)	105G7	NCL-L-PTH-488			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
Pax-5	1EW	NCL-L-PAX-5	HD		1 mL						HEMATOPATHOLOGY
		PA0552	HD					7 mL			
Perforin	5B10	NCL-L-PERFORIN			1 mL						HEMATOPATHOLOGY
PD-1	CAL20	PA0216						7 mL			IMMUNO ONCOLOGY
PD-L1	73-10	PA0832	HD					7 mL			IMMUNO ONCOLOGY
Placental Alkaline Phosphatase	8A9	NCL-L-PLAP-8A9	HD		1 mL						GYNEPATHOLOGY
		PA0161	HD					7 mL			
Polo-Like Kinase 1 (PLK-1)	MJS1	NCL-L-PLK-1			1 mL						SPECIALIZED
Progesterone Receptor	16	NCL-L-PGR-312	HD		1 mL						BREAST PATHOLOGY
		NCL-L-PGR-312/2	HD			2 mL					
		PA0312	HD					7 mL			
Progesterone Receptor (A/B Forms)	16/SAN27	NCL-L-PGR-AB			1 mL						BREAST PATHOLOGY
Prostate Specific Antigen	35H9	NCL-L-PSA-431	HD		1 mL						UROPATHOLOGY
		PA0431	HD					7 mL			
Prostate Specific Membrane Antigen	1D6	NCL-L-PSMA			1 mL						UROPATHOLOGY
Prostatic Acid Phosphatase	PASE/4LJ	NCL-L-PAP			1 mL						UROPATHOLOGY
		PA0006						7 mL			
Protein Gene Product 9.5	10A1	NCL-L-PGP9.5			1 mL						NEUROPATHOLOGY
		PA0286						7 mL			
Retinoblastoma Gene Protein	13A10	NCL-L-RB-358			1 mL						SPECIALIZED
S-100	EP32	NCL-L-S100-167	HD		1 mL						DERMATOPATHOLOGY
		PA0031	HD					7 mL			

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A D V A N C E D      S T A I N I N G      R E A G E N T S  
N O V O C A S T R A      P R I M A R Y      A N T I B O D I E S

NAME	CLONE	PRODUCT CODE	HD	CONCENTRATES (MANUAL)				RTU (AUTOMATED)			PATHOLOGY MENU
				0.5 mL	1 mL	2 mL	2.5 mL	7 mL	13.5 mL	30 mL	
Sarcoglycan Antibodies	Alpha: clone Ad1/20A6	NCL-L-a-SARC			1 mL						MUSCLE PATHOLOGY
	Beta: clone bSarc1/5B1	NCL-L-b-SARC			1 mL						
	Delta: clone dSarc3/12C1	NCL-d-SARC			1 mL						
	Gamma: clone 35DAG/21B5	NCL-g-SARC			1 mL						
Serotonin	Polyclonal	PA0736						7 mL			GASTROINTESTINAL PATHOLOGY
SMA (Alpha Smooth Muscle Pathology Actin)	alpha sm-1	NCL-L-SMA	HD		1 mL						MUSCLE PATHOLOGY
		PA0943	HD					7 mL			
Spectrin	RBC2/3D5	NCL-SPEC1			1 mL						MUSCLE PATHOLOGY
Surfactant Protein A	32E12	NCL-L-SP-A			1 mL						LUNG PATHOLOGY
Synaptophysin	27G12	NCL-L-SYNAP-299	HD		1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0299	HD					7 mL			
Tartrate-Resistant Acid Phosphatase (TRAP)	26E5	NCL-L-TRAP			1 mL						HEMATOPATHOLOGY
		PA0093						7 mL			
Terminal Deoxynucleotidyl Transferase	SEN28	NCL-L-TDT-339	HD		1 mL						HEMATOPATHOLOGY
		PA0339	HD					7 mL			
Thyroglobulin	1D4	NCL-L-THY			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
Thyroid Peroxidase	AC25	NCL-L-TPO			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
Thyroid Stimulating Hormone	QB2/6	NCL-L-TSH			1 mL						HEAD, NECK AND ENDOCRINE PATHOLOGY
		PA0776						7 mL			
Thyroid Transcription Factor-1	SPT24	NCL-L-TTF-1	HD		1 mL						LUNG PATHOLOGY
		PA0364	HD					7 mL			
TIM-3	EPR22241	PA0360						7 mL			IMMUNO ONCOLOGY
Topoisomerase I	1D6	NCL-L-TOPO I			1 mL						SPECIALIZED
Topoisomerase II Alpha	3F6	NCL-L-TOPOIIA			1 mL						SPECIALIZED
Tyrosinase	T311	NCL-L-TYROS			1 mL						DERMATOPATHOLOGY
		PA0322						7 mL			
Tyrosine Hydroxylase	1B5	NCL-L-TH			1 mL						NEUROPATHOLOGY
Utrophin	DRP3/20C5	NCL-DRP2					1 mL				MUSCLE PATHOLOGY
Vascular Endothelial Growth Factor Receptor-3	KLT9	NCL-L-VEGFR-3			1 mL						SPECIALIZED
Villin	CWWB1	NCL-L-VILLIN			1 mL						GASTROINTESTINAL PATHOLOGY
Vimentin	V9	NCL-L-VIM-V9	HD		1 mL						TUMOR DIFFERENTIATION
		PA0640	HD					7 mL			
	SRL33	NCL-L-VIM-572			1 mL						
von Willebrand Factor (Factor VIII-related antigen)	36B11	NCL-L-vWF			1 mL						SOFT TISSUE PATHOLOGY
		PA0055						7 mL			
Wilms' Tumor	WT49	NCL-L-WT1-562	HD		1 mL						UROPATHOLOGY
		PA0562	HD					7 mL			
Zap-70	L453R	NCL-L-ZAP-70			1 mL						HEMATOPATHOLOGY
		PA0998						7 mL			
Negative Control (Mouse)	MOPC-21	PA0996						7 mL			CONTROL
Negative Control (Rabbit)	Polyclonal	PA0777						7 mL			CONTROL

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# NOVOCASTRA PRIMARY ANTIBODIES



Spanning 14 pathology menus, Leica Biosystems offers laboratories a comprehensive range of clinically relevant antibodies for the most demanding workload.

## NOVOCASTRA HD ANTIBODIES

Each antibody in the Novocastra HD range has been independently evaluated<sup>1</sup> by an external QA scheme, in comparison with two market leading vendors. Each antibody within the HD portfolio has been optimized to deliver high quality staining, for results you can trust.

## NOVOCASTRA BOND RTU

BOND Ready-to-Use antibodies are optimized to deliver high quality staining results on BOND systems. This format eliminates variability that can occur with manual antibody dilutions and also reduces preparation time. Pre-optimized reagents and automated protocols deliver consistent results you can depend on.

## NOVOCASTRA LIQUID CONCENTRATES

The Novocastra liquid concentrated antibody range is an extensive collection of primary antibodies for IHC testing. Concentrated antibodies afford workflow flexibility, enabling users to optimize their protocols according to their pre-analytical conditions<sup>2</sup>.

Leica Biosystems is an international company with a strong network of worldwide customer services. For detailed contact information on your nearest sales office or distributor please visit our website:

[LeicaBiosystems.com](http://LeicaBiosystems.com)

Leica Biosystems is a global leader in workflow solutions and automation. As the only company to own the workflow from biopsy to diagnosis, we are uniquely positioned to break down the barriers between each of these steps. Our mission of "Advancing Cancer Diagnostics, Improving Lives" is at the heart of our corporate culture. Our easy-to-use and consistently reliable offerings help improve workflow efficiency and diagnostic confidence. The company is represented in over 100 countries. It has manufacturing facilities in 9 countries, sales and service organizations in 19 countries, and an international network of dealers. The company is headquartered in Nussloch, Germany. Visit [LeicaBiosystems.com](http://LeicaBiosystems.com) for more information.

<sup>1</sup> Independent analysis commissioned by Leica Biosystems and conducted by NordiQC according to the manufacturers' instructions for use and on the corresponding staining platform.  
<sup>2</sup> For recommended protocols see instructions for use. Any deviation from recommended conditions must be validated by the user.