EUROLineScan

Automated evaluation of membrane-based test systems

REQUEST

**LIS
Laboratory Information
System**

Creation of worklists

INCUBATION

EUROBlotOne
(fully automatic)

EUROBlotMaster
(semi-automatic)

Pipetting
(manual)

RESULTS

Generation of results

EUROLineScan

Scanning of blot strips

EVALUATION

Image analysis

VALIDATION

IMAGE RECORDING

EUROBlotOne

Flatbed scanner
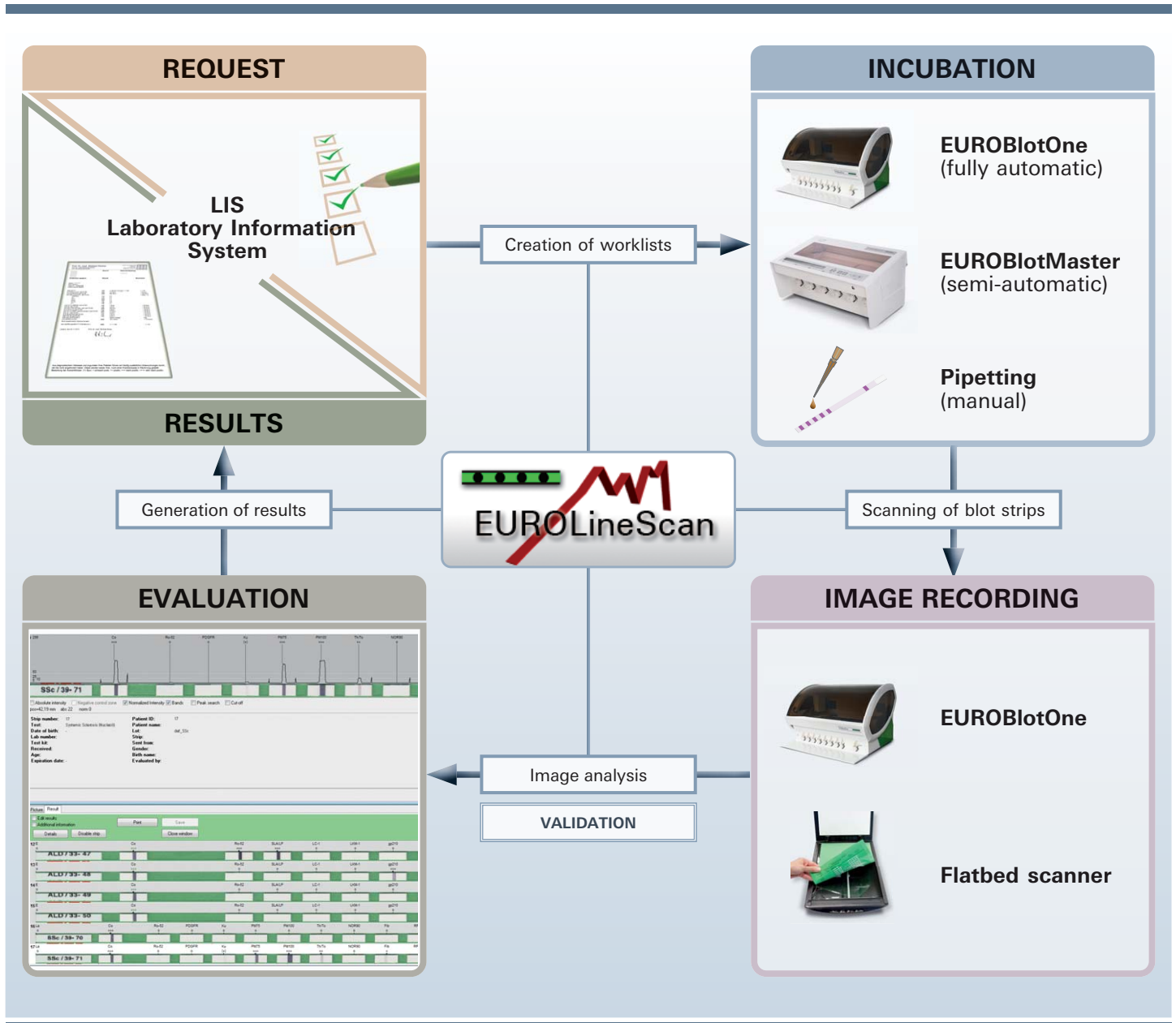
- Standardised evaluation of all EUROIMMUN blot products
- Complete results available within few minutes after incubation and digital archiving of results
- Bidirectional connection to LIS or EUROLabOffice 4.0
- Flexible and scalable automation solutions

EUROLineScan

The **EUROLineScan** system is designed for automated evaluation of incubated membrane-based test systems and administration and detailed documentation of the obtained results. The software automatically records and identifies the bands and measures their intensity. The automated evaluation of the test strips can be monitored and, if necessary, edited manually. Any changes are automatically documented. Eventually the results are archived electronically together with the image data, so that it is no longer necessary to store the potentially infectious strips. An individual result sheet can be created for each patient.

EUROLineScan does also cove the bidirectional communication with **EUROLabOffice 4.0** (laboratory management software) or a laboratory information systems (LIS) for the import of worklists and export of results.

The compact fully automatic instrument **EUROBlotOne** is designed for standardised processing of EUROIMMUN immunoblot strips (EUROLINE, EUROLINE-WB, Westernblot) – from sample recognition to the final analysis result. The samples are pipetted by the instrument and all incubation and wash steps are performed fully automatically. In the last step, the image data recorded by the intergrated camera are automatically transfered to the **EUROLineScan software**.

As an alternative to **EUROBlotOne,** the immunoblot strips can also be incubated manually or using the **EUROBlotMaster** and recorded using a flatbed scanner. In this case, the automated evaluation is then also carried out by **EUROLineScan**.

EUROIMMUN is happy to assist you in the implementation of the EUROLineScan program in an existing laboratory environment.

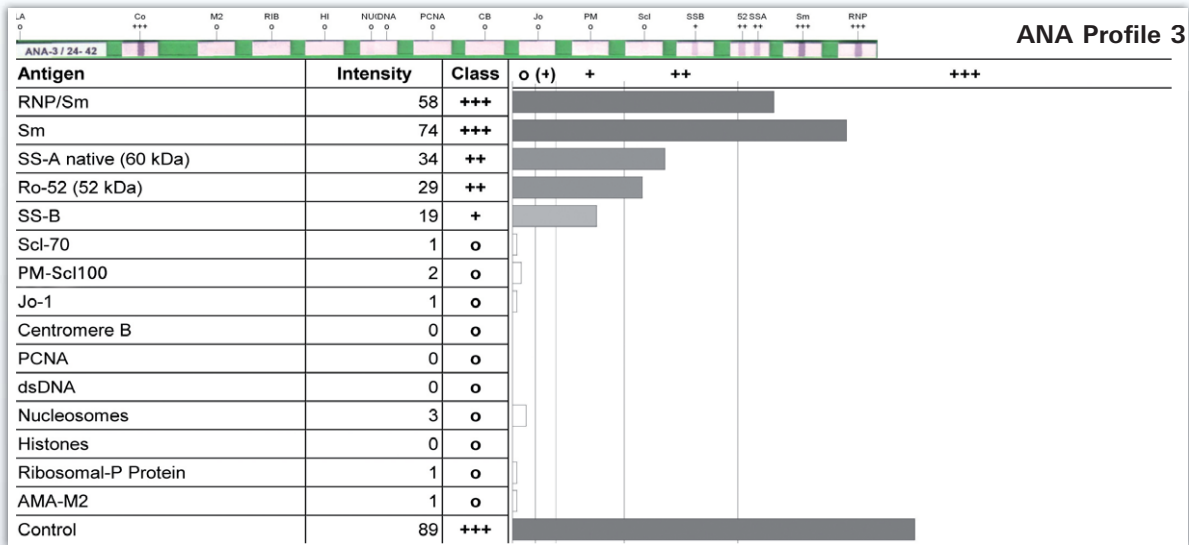## Evaluation of incubated blot strips with EUROLineScan
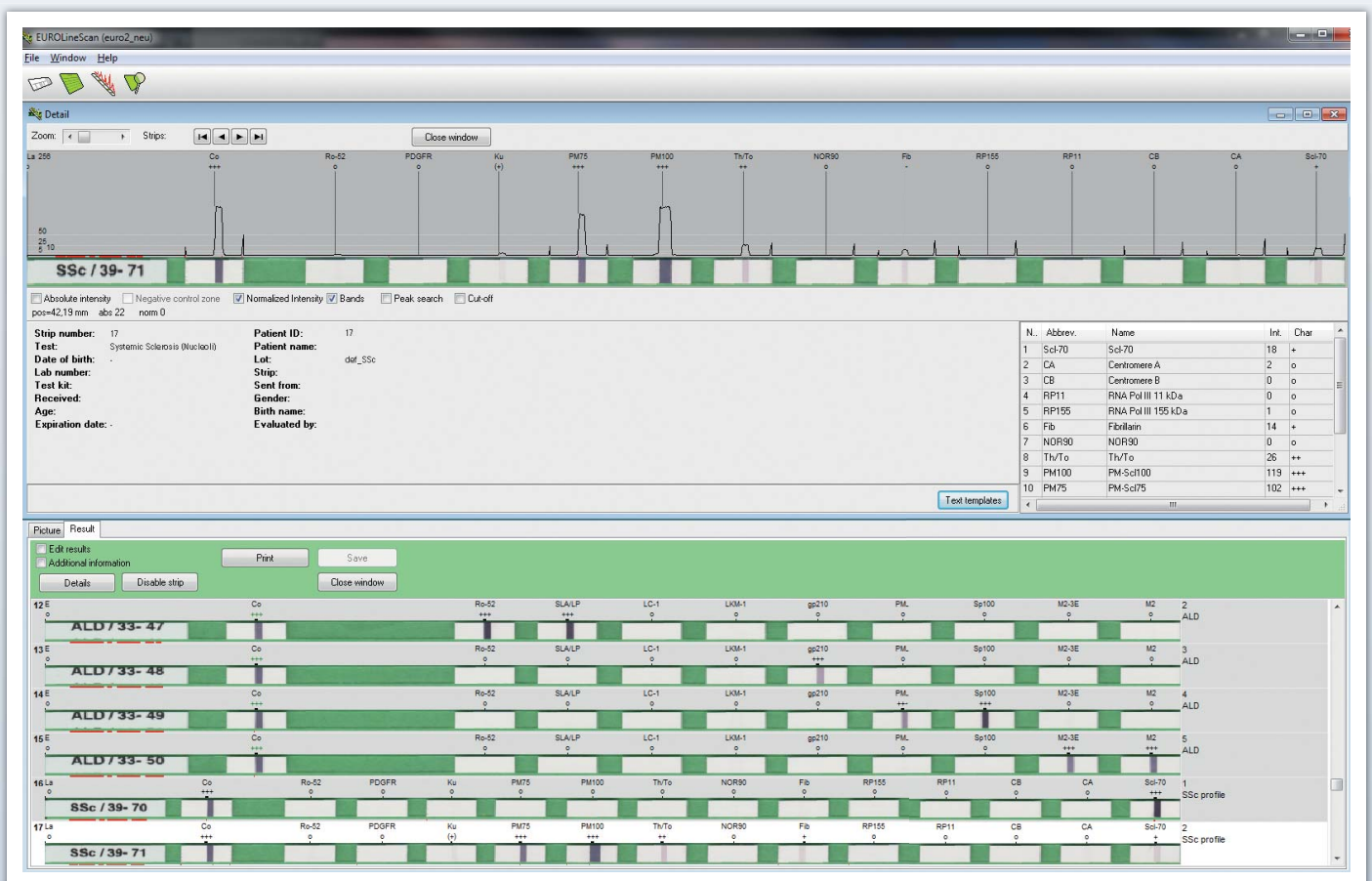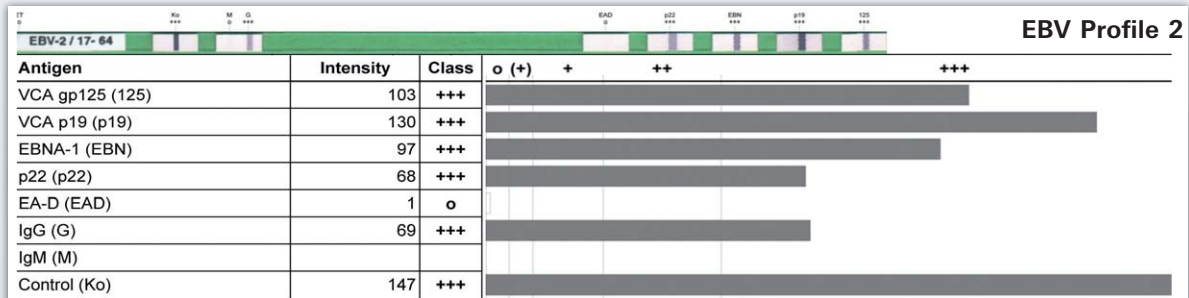
System requirements:

Computer: Pentium from 350 MHz or compatible with Windows XP, Windows Vista, Windows 7, Windows 8 or Windows 10, 512 MB RAM, approx. 1 GB free hard disc space (for the sole installation 120 MB, the remaining space for graphic and patient data). Graphic and screen resolution at least 1024 x 768. **Flatbed scanner:** Canon LiDE Serie, at least 300 dpi; recommended: 600 dpi. **Camera system:** for direct recording of the membrane strips in the incubation tray; only available from EUROIMMUN. **Printer:** standard commercial printer is sufficient (for findings and protocols). **Barcode scanner:** Jarltech 2009 for Westernblot templates, and Honeywell Xenon 1900 or Symbol DS6707 for EUROASSAY slides.
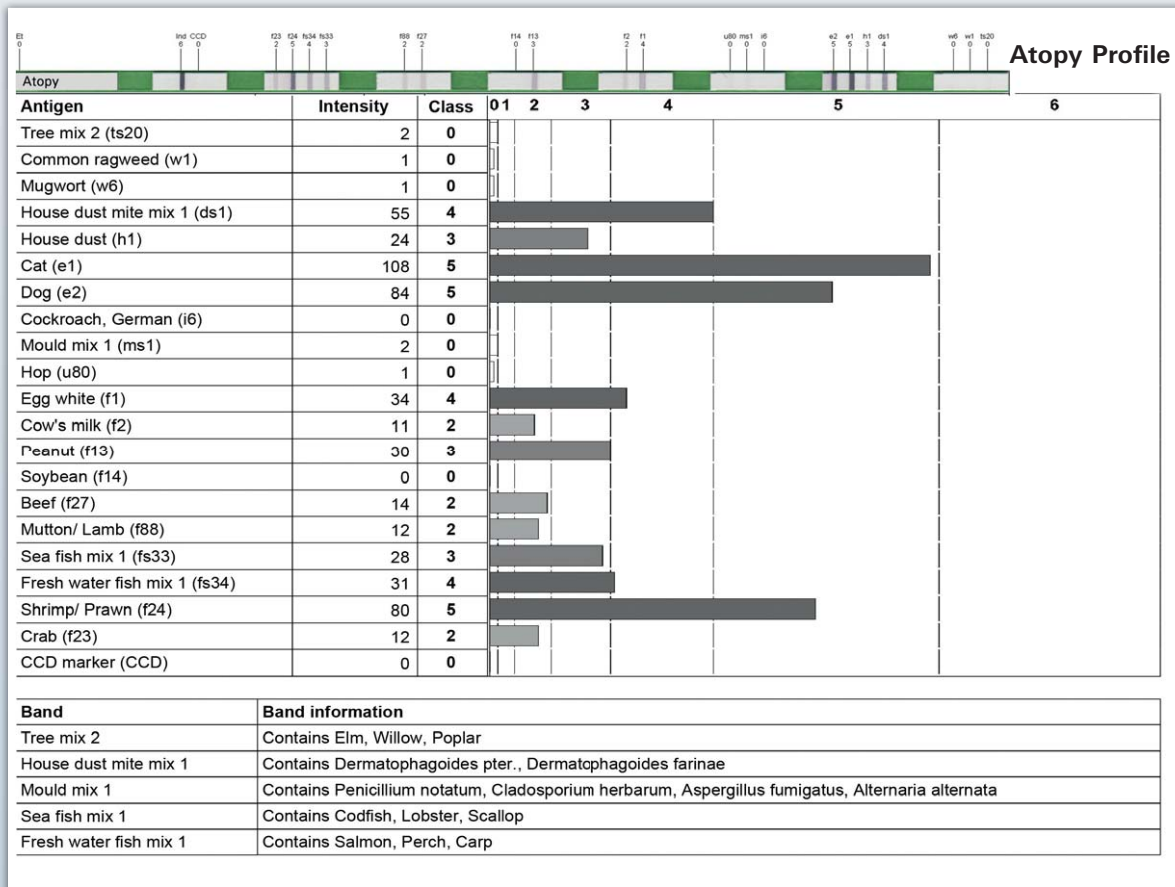
EUROIMMUN

Medizinische Labordiagnostika AG

ANA Profile 3

ANA-3 / 24- 42

Antigen	Intensity	Class	o (+) + ++ +++
RNP/Sm	58	+++	
Sm	74	+++	
SS-A native (60 kDa)	34	++	
Ro-52 (52 kDa)	29	++	
SS-B	19	+	
Scl-70	1	o	
PM-Scl100	2	o	
Jo-1	1	o	
Centromere B	0	o	
PCNA	0	o	
dsDNA	0	o	
Nucleosomes	3	o	
Histones	0	o	
Ribosomal-P Protein	1	o	
AMA-M2	1	o	
Control	89	+++	

EBV Profile 2

EBV-2 / 17- 64

Antigen	Intensity	Class	o (+) + ++ +++
VCA gp125 (125)	103	+++	
VCA p19 (p19)	130	+++	
EBNA-1 (EBN)	97	+++	
p22 (p22)	68	+++	
EA-D (EAD)	1	o	
IgG (G)	69	+++	
IgM (M)			
Control (Ko)	147	+++	

Atopy Profile

Atopy

Antigen	Intensity	Class	0 1 2 3 4 5 6
Tree mix 2 (ts20)	2	0	
Common ragweed (w1)	1	0	
Mugwort (w6)	1	0	
House dust mite mix 1 (ds1)	55	4	
House dust (h1)	24	3	
Cat (e1)	108	5	
Dog (e2)	84	5	
Cockroach, German (i6)	0	0	
Mould mix 1 (ms1)	2	0	
Hop (u80)	1	0	
Egg white (f1)	34	4	
Cow's milk (f2)	11	2	
Peanut (f13)	30	3	
Soybean (f14)	0	0	
Beef (f27)	14	2	
Mutton/ Lamb (f88)	12	2	
Sea fish mix 1 (fs33)	28	3	
Fresh water fish mix 1 (fs34)	31	4	
Shrimp/ Prawn (f24)	80	5	
Crab (f23)	12	2	
CCD marker (CCD)	0	0	

Band	Band information
Tree mix 2	Contains Elm, Willow, Poplar
House dust mite mix 1	Contains Dermatophagoides pter., Dermatophagoides farinae
Mould mix 1	Contains Penicillium notatum, Cladosporium herbarum, Aspergillus fumigatus, Alternaria alternata
Sea fish mix 1	Contains Codfish, Lobster, Scallop
Fresh water fish mix 1	Contains Salmon, Perch, Carp

Autoimmune diagnostics

Infectious serology

Allergy diagnostics

EUROIMMUN

Medizinische Labordiagnostika AG

Product	Test	Order no.	🖨	📇	👁
Autoantibody diagnostics					
ANA Profiles (Mi-2α, Mi-2β, Ku, nRNP/Sm, Sm, SS-A, Ro-52, SS-B, Scl-70, PM-Scl100, PM-Scl75, Jo-1, CENP A, CENP B, PCNA, RP11, RP155, gp210, Sp100, PML, dsDNA, nucleosomes, histones, rib. P proteins, AMA-M2, RNP70, RNPA, RNPC, DFS70, Ha, Ks, Zo)	EL	DL 1590-X G	X	X	X
Myositis Profiles (Mi-2α, Mi-2β, TIF1γ, MDA5, NXP2, SAE1, Ku, PM-Scl100, PM-Scl75, Jo-1, SRP, PL-7, PL-12, EJ, OJ, Ro-52, cN-1A, HMGCR, Ha, Ks, Zo)	EL	DL 1530-X G	X	X	X
Systemic Sclerosis (Nucleoli) Profiles (Scl-70, CENP A, CENP B, RP11, RP155, fibrillarin, NOR-90, NVL, Th/To, PM-Scl100, PM-Scl75, Ku, PDGFR, Ro-52)	EL	DL 1532-X G	X	X	X
Myeloperoxidase (MPO), proteinase 3 (PR3), glomerular basement membrane (GBM)	EL	DL 1200-X G	X	X	X
Liver Profiles (AMA-M2, M2-3E (BPO), Sp100, PML, gp210, LKM-1, LC-1, SLA/LP, SS-A, Ro-52, Scl-70, CENP A, CENP B, PGDH)	EL	DL 1300-X G	X	X	X
Gastrointestinal profiles IgA (endomysium, gliadin-analogue fusion peptide (GAF-3X), mannan (ASCA))	EL	DL 1360 A	X	X	X
Gastrointestinal profiles IgG (endomysium, GAF-3X, PCA, intrinsic factor, ASCA)	EL	DL 1360 G	X	X	X
AMA Profile IgGM (AMA-M2, M2-3E, M4, M9)	EL	DL 1620-1 O	X	X	X
Ganglioside Profiles (GM1, GM2, GM3, GD1a, GD1b, GT1b, GQ1b)	EL	DL 1130-X G, M	X[4]	X	X
Neuronal Antigens Profiles (amphiphysin, CV2, PNMA2 (Ma2/Ta), Ri, Yo, Hu, recoverin, SOX1, titin, Zic4, GAD65, Tr (DNER))	EL	DL 1111-X G	X	X	X
Coeliac Disease Profile	EL	DL 1910 A, G	X	X	X
Infection diagnostics					
Bordetella pertussis	EL	DN 2050 A, G	X	X	X
Borrelia-RN-AT (suitable for serum and CSF)	EL	DN 2131 G, M	X	X	X
Borrelia-RN-AT-adv (suitable for serum and CSF)	EL	DN 2131-2 M	X	X	X
Borrelia afzelii	WB	DY 2131 G, M	X	X	X
Borrelia afzelii plus recombinant VlsE	EL-WB	DY 2131-1 G, M	X	X	X
Borrelia burgdorferi	WB	DY 2132 G, M	X	X	X
Borrelia garinii	WB	DY 2134 G, M	X	X	X
Chlamydia, human pathogen (HP)	EL-WB	DY 2190-1 A, G	X	X	X
Cytomegaly virus	EL	DN 2570 G, M	X	X	X
Echinococcus	EL-WB	DY 2321-1 G	X	X	X
EBV Profile 2 (VCA gp125, VCA p19, EBNA-1, p22, EA-D)	EL	DN 2790-2 G, M	X	X	X
Hantavirus Profile 1	EL	DN 278h-1 G, M	X	X	X
Hepatitis E virus (HEV)	EL	DN 2525 A, G, M	X	X	X
Helicobacter pylori	EL-WB	DY 2080-1 A, G	X	X	X
Herpes simplex virus 1 (HSV-1) plus HSV-2 type-specific gG2	EL-WB	DY 2531-1 G, M	X	X	X
Parvovirus B19	EL	DN 2580 G, M	X[4]	X	X
Rubella virus	WB	DY 2590 G	X	X	X
SARS-CoV-2	EL	DN 2606-1 G	X	X	X
TO.R.C.H. Profile, T.O.R.C.H. 10	EL	DN 2410-4 G, M	X	X	X
Toxocara	WB	DY 2311 G	X	X	X
Treponema pallidum	EL	DN 2111 G, M	X	X	X
Treponema pallidum	WB	DY 2111 G, M	X	X	X
Treponema pallidum plus cardiolipin	EL-WB	DY 2111-1 G, M	X	X	X
Treponema pallidum	EL	DN 2173 A, G	X	X	X
Yersinia enterocolitica	EL	DN 2173 A, G	X	X	X
Yersinia enterocolitica	WB	DY 2173 A, G	X	X	X
Veterinary diagnostics: Borrelia, dog and horse	EL	DN 2136 GC, MC, GE	X	X	X
Veterinary diagnostics: Tick-Borne Profile, dog and horse	EL	DN 2136-11 GC, GE	X	X	X
Allergy diagnostics					
Inhalation[2]	EL	DP 31XX E	X	X	–
Foods[2]	EL	DP 34XX E	X	X	–
Atopy, pediatrics[2]	EL	DP 37XX E	X	X	–
Insect venoms	EL	DP 3720 E	X	X	–
DPA-Dx[3] Pollen[2]	EL	DP 321X-1 E	X	X	–
DPA-Dx Pediatrics	EL	DP 3812-X E	X	X	–
DPA-Dx Milk 1	EL	DP 3510-1 E	X	X	–
DPA-Dx Peanut 1	EL	DP 3511-1 E	X	X	–
DPA-Dx Insect venoms[2]	EL	DP 385X-X E	X	X	–

EUROLINE (EL), EUROLINE WB (EL-WB), Westernblot (WB), EUROASSAY (EA)

🖨 = using EUROBlotOne   📇 = using flatbed scanner   👁 = visual
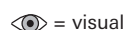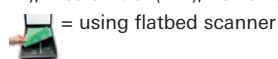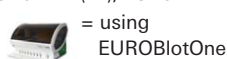
[1] under development
[2] including region-specific profiles
[3] defined partial allergen diagnostics
[4] no digitalization