




















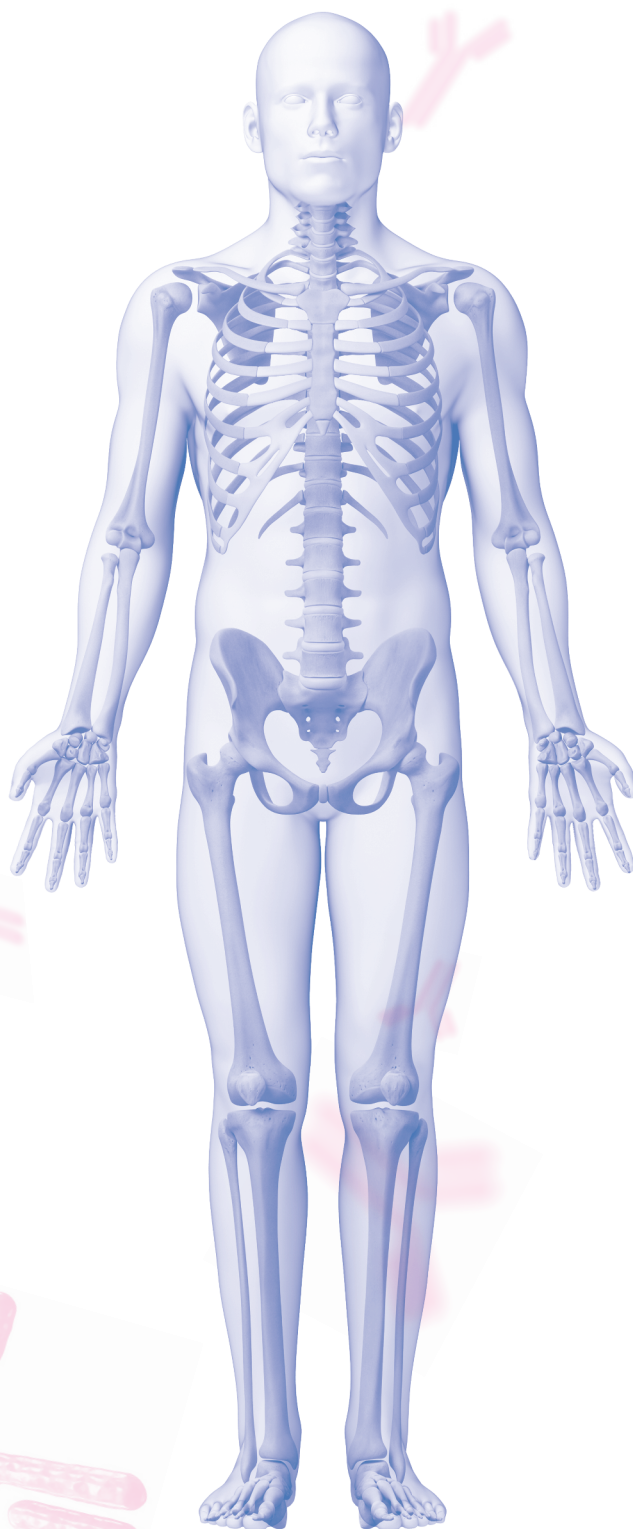


IMTEC-ANA-LIA XL

Expanded panel – enhanced efficiency

- > Detection of 18 autoantibodies
- > Additional marker DFS70 for the exclusion of systemic rheumatic diseases
- > Ready to use dilution buffer

	Reference Line
	Function Control
	cut-off Control
	dsDNA
	Nucleosome
	Histone
	SmD1
	PCNA
	RO / (RPP)
	SS-A / Ro 60
	SS-A / Ro 52
	SS-B / La
	CENP-B
	Scl70
	U1-snRNP
	AMA M2
	Jo-1
	PM-Scl
	Mi-2
	Ku
	DFS70



IMTEC-ANA-LIA XL

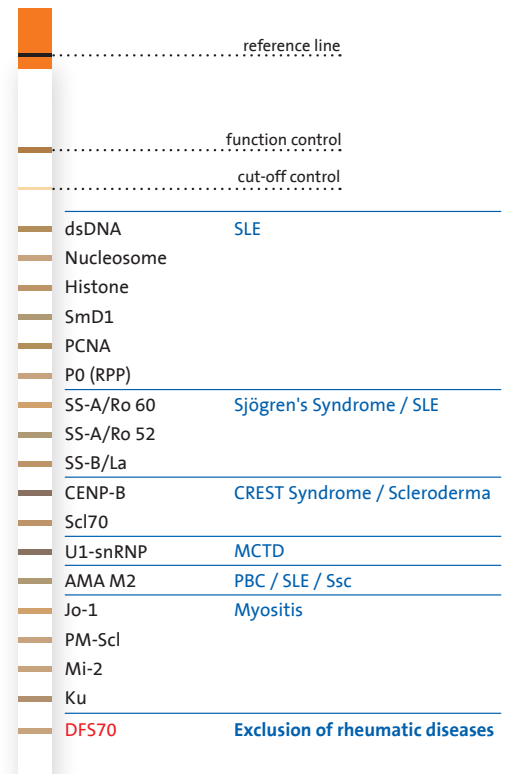
Expanded panel – enhanced efficiency

ANA-LIA-XL – Improved to optimize diagnostics

Due to the multi parameter analysis, as well as easy and reliable processing Line immunoassay (LIA) has gained in importance for autoimmune diagnostics.

The IMTEC-ANA-LIA XL is the new generation of our proven ANA-LIA Maxx test. It is the result of continuous development based on customer feedback and laboratory requirements and demonstrates our commitment to high quality solutions.

The new LIA contains DFS70 as additional marker and an optimized ready-to-use dilution buffer. The new liquid dilution buffer can be applied directly and is therefore easier and safer to use.



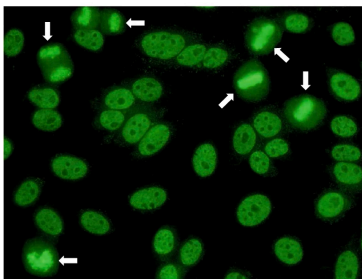
DFS70 – A useful marker in the exclusion of systemic rheumatic diseases

The investigation of antibody profiles is essential for autoimmune diagnostics. The ANA LIA Maxx already provides an overview of the relevant ANA markers to support the diagnosis of rheumatic diseases and their overlap syndromes. These advantages remain with the new ANA-LIA XL. With DFS70 as an exclusion marker for systemic rheumatic diseases, the LIA is supplemented by an additional feature.

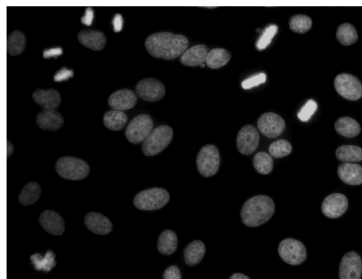
The immunofluorescence assay (IFA) shows similar patterns for DFS70 and dsDNA

DFS70 autoantibodies show a nuclear dense fine speckled ANA pattern in the HEp-2 IFA, which is very similar to the classical homogeneous ANA pattern associated with dsDNA autoantibodies. The ANA-LIA XL differentiates between dsDNA and DFS70 at a glance.

Anti-DFS70 IFA pattern



DNA staining



Dense fine speckles (DFS) pattern visualized by immunofluorescence assay (IFA) in HEp-2 cell slides using a monospecific human anti-DFS70 serum. Arrows point to the distinctive bright staining of mitotic chromosomes.¹

DFS70 antibodies are only relevant if they appear isolated

Isolated DFS70 antibodies that appear on LIA help to identify false-positive IFA results. This ensures greater reliability in ruling out rheumatic diseases. Due to the large number of different antigens in one test, LIA is the ideal method to detect whether DFS 70 antibodies are present in isolation or in combination with other antibodies.

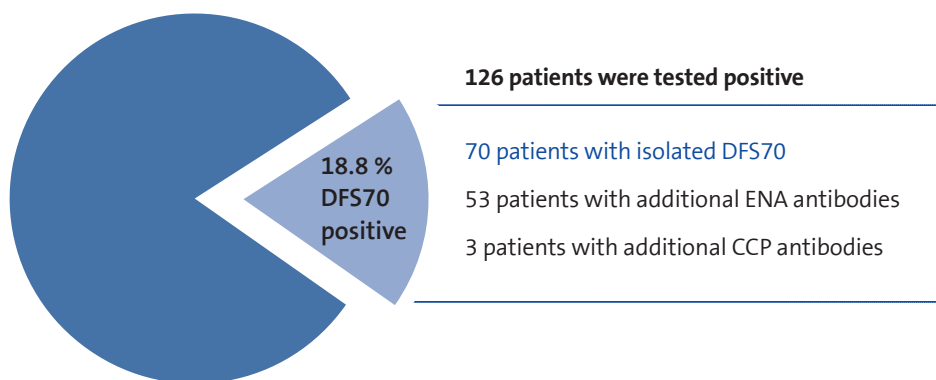


Figure 1

671 patients in a rheumatism outpatient clinic were examined for DFS70 antibodies. In all patients of whom a rheumatic disease was ruled out and DFS70 antibodies could be detected at the same time, the DFS70 antibodies were found in isolation. No other ANA marker were positive.²

The ANA-LIA XL shows excellent results when compared to the reference product

Compared to the reference, the IMTEC LIA shows a 98 % agreement with 100 % sensitivity and 97 % specificity.

Method comparison DFS70	ANA-LIA XL
Total number of samples	90
Overall Agreement	98 %
Sensitivity	100 %
Specificity	97 %

IMTEC-ANA-LIA XL

Expanded panel – enhanced efficiency

Ordering information

IMTEC-ANA-LIA XL

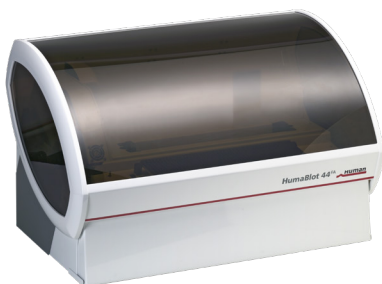
REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration
ITC92007	IgG	24 tests	dsDNA, Nucleosome, Histone, SmD1, PCNA, P0, SS-A/Ro 60, SS-A/Ro 52, SS-B/La, CENP-B, Scl70, U1-snRNP, AMA M2, Jo-1, PMScl100, Mi-2 and Ku 70/80, DFS70	18	Qualitative internal function and cut-off control

HumaBlot 44^{FA} and HumaScan^{FA} simplify LIA processing and interpretation

HumaBlot 44^{FA} is a fully automated system for processing line immunoassays. It performs all steps from the handling and dilution of samples and reagents to the scanning of strips and the test interpretations. With a complete walk-away solution, a flexible number of tests and up to 44 tests per run, it is ideally suited for laboratories with low to high throughput and laboratories with high quality assurance requirements. LIA interpretation can be performed by the HumaScan^{FA} software, which is integrated into HumaBlot 44^{FA}, but can also be used separately with a flatbed scanner.

HumaBlot 44^{FA} REF ITC80000

Fully automated LIA system



HumaScan^{FA} software REF ITC80001

LIA interpretation software

Lab ID	Sample Scan	ANA	dsDNA	PCNA	SS-A/Ro	SS-B/La	CENP-B	Scl70	U1-snRNP	AMA M2	Jo-1	PMScl100	Mi-2	Ku 70/80	DFS70
1	Patient 01														
2	Patient 02														
3	Patient 03														
4	Patient 04														
5	Patient 05														
6	Patient 06														
7	Patient 07														
8	Patient 08														
9	Patient 09														
10	Patient 10														
11	Patient 11														
12	Patient 12														
13	Patient 13														
14	Patient 14														
15	Patient 15														
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21	Patient 21														
22	Patient 22														
23	Patient 23														
24	Patient 24														
25	Patient 25														

For more information www.human.de/autoimmune-instruments

- Ortiz-Hernandez, G.L., Sanchez-Hernandez, E.S. & Casiano, C.A. Twenty years of research on the DFS70/LEDGF autoantibody-autoantigen system: many lessons learned but still many questions. *Autoimmun Highlights* 11, 3 (2020). <https://doi.org/10.1186/s13317-020-0126-4>
- Data from Salzer U et al. THU0380. DOI: 10.1136/annrheumdis-2018-eular.6479 (10).
- Clin Rev Allergy Immunol. 2016 Jun 28. [Epub ahead of print] Review. PubMed PMID: 27350273.
- Infantino M, Bizzaro N, Grossi V, Manfredi M. The long-awaited, pseudo-DFS pattern. *Expert Rev Clin Immunol*. 2019 15(5):445.
- Dellavance A, Baldo DC, Zheng B, Mora RA, Fritzler MJ, Hiepe F, Ronnelid J, Satoh M, Garcia-De La Torre I, Wener MH, Chan EKL, Andrade LEC. Establishment of an international autoantibody reference standard for human anti-DFS70 antibodies: proof-of-concept study for a novel Megapool strategy by pooling individual specific sera. *Clin Chem Lab Med*. 2019;57:1754-63
- Ortiz-Hernandez, G.L., Sanchez-Hernandez, E.S. & Casiano, C.A. Twenty years of research on the DFS70/LEDGF autoantibody-autoantigen system: many lessons learned but still many questions. *Autoimmun Highlights* 11, 3 (2020). <https://doi.org/10.1186/s13317-020-0126-4>

