

Connective tissue diseases

# EliA DFS70 test – addressing the challenges in ANA HEp-2 positive results



#### The dense fine speckled (DFS) pattern is common in routine testing

- Found in up to 37% of samples routinely tested for anti-nuclear antibodies (ANA) by immunofluorescence assay (IFA)<sup>1</sup>
- A common pattern in apparently healthy individuals and patients unlikely to suffer from systemic autoimmune rheumatic diseases (SARD)<sup>1, 2</sup>
- Included as "AC-2 dense fine speckled" in the International Consensus on Antinuclear Antibody Patterns (ICAP)<sup>3</sup>



#### Confirmatory testing is recommended to differentiate anti-DFS70 antibodies from other ANA

- Identification and differentiation of the AC-2 pattern from disease associated ANA patterns (e.g. AC-1 homogeneous, AC-4 – fine speckled, AC-5 – speckled) can be difficult<sup>1,3</sup>
- Inaccurate reporting of the AC-2 pattern can lead to unnecessary additional testing and negatively impact patient management<sup>1</sup>
- DFS pattern results from autoantibodies against the DFS70 protein, also known as lens epithelium-derived growth factor (LEDGF) or p75<sup>1,3</sup>
- Testing for anti-DFS70 antibodies is recommended in routine ANA testing algorithms 1-3



## Isolated anti-DFS70 antibodies may be an exclusionary marker for connective tissue diseases (CTD)

- Up to 22% of healthy individuals but <1% of patients with ANA associated rheumatic diseases (AARD) show single positivity for anti-DFS70 antibodies<sup>2</sup>
- Single positivity for anti-DFS70 antibodies has a negative association with AARD<sup>2</sup>

Testing for anti-DFS70 antibodies can aid in clinical decision making



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#### EliA<sup>™</sup> DFS70 test – key features

Antigen:	Recombinant full-length human DFS70 expressed in the baculovirus/insect cell system				
Controls:	EliA <sup>™</sup> DFS70 Positive Control and EliA <sup>™</sup> IgG/IgM/IgA Negative Control				
Automation:	Available on Phadia <sup>™</sup> 200 and Phadia <sup>™</sup> 250 instruments as well as on Phadia <sup>™</sup> 2500+ and Phadia <sup>™</sup> 5000+ series				
Flexibility:	Random access* testing with possibility of reflex testing				
Efficiency:	Easy add-on to EliA <sup>™</sup> test portfolio by using the EliA <sup>™</sup> IgG calibration method and ready-to-use reagents				
Cost savings:	Interchangeable reagents with other EliA tests, e.g. EliA <sup>™</sup> CTD Screen and EliA <sup>™</sup> dsDNA test				
Cinical performance:	In an analysis of 55 samples with the typical DFS70 pattern in IFA on HEp-2 cells and 156 samples as systemic autoimmune rheumatic disease controls, all sera with DFS70 pattern were found positive and all 156 disease controls were negative <sup>4</sup>				

\*random access testing available on Phadia 250 instrument, Phadia 2500+ and Phadia 5000+ series



Phadia<sup>™</sup>200 instrument

Phadia<sup>™</sup>250 instrument



Phadia<sup>™</sup> 2500+ series Phadia 2500+ comprises Phadia<sup>™</sup> 2500, Phadia<sup>™</sup> 2500E and Phadia<sup>™</sup> 2500EE

Interpretation of test results



Phadia<sup>™</sup> 5000+ series Phadia 5000+ comprises Phadia<sup>™</sup> 5000, Phadia<sup>™</sup> 5000E and Phadia<sup>™</sup> 5000E+E

#### **Technical and ordering information**

				interpretation of test results			
	Product	Article No.	Package size	Negative	Equivocal	Positive	Short name
	EliA DFS70 Well	14-5673-01	2 x 16 wells	< 7 EliA U/mL	7–10 EliA U/mL	> 10 EliA U/mL	dfs

#### References

1. Malyavantham K, Suresh L. (2017) Analysis of DFS70 pattern and impact on ANA screening using a novel HEp-2 ELITE/DFS70 knockout substrate. Auto Immun Highlights. 8(1):3.

2. Conrad K, Rober N, Andrade LE, Mahler M. (2017) The Clinical Relevance of Anti-DFS70 Autoantibodies. Clin Rev Allergy Immunol. 52(2):202-16.

3. Chan EKL, Damoiseaux J, Carballo OG, Conrad K, de Melo Cruvinel W, Francescantonio PLC, et al. (2015) Report of the First International Consensus on Standardized Nomenclature of Antinuclear Antibody HEp-2 Cell Patterns 2014–2015. Frontiers in Immunology. 6(412).

4. Thermo Fisher Scientific. Internal Study.

#### Learn more at thermofisher.com/elia

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