IMTEC-Arthritis-LIA

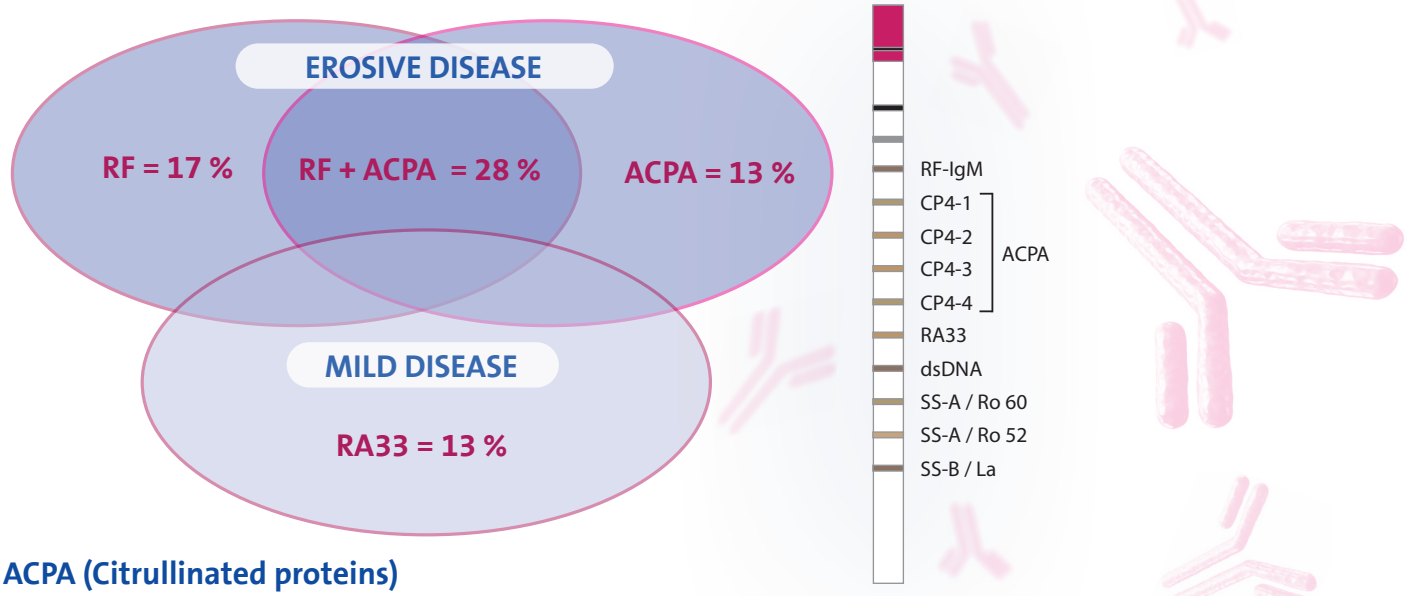
Detection of rheumatoid arthritis – all relevant antigens in one test

Clinical value

Rheumatoid arthritis (RA) is the most common form of inflammatory joint disease affecting approximately 1 % of the worldwide adult population.[1] Particularly in the early stages the diagnosis of the disease is difficult and efficient diagnostic tools are urgently needed. IMTEC-Arthritis-LIA allows the determination of all relevant antibodies and is therefore a powerful tool for the diagnosis of RA.

Percentage of autoantibodies with high titer present in rheumatoid arthritis patients

In patients with early RA, there is an association between RF, ACPA and anti-RA33 antibodies. Studies have shown that 58 % of patients were positive for RF and/or ACPA. They showed a greatly increased risk of developing erosive diseases. RA33 was the only detectable antibody in 13 % of the patients who had milder disease and more favorable prognosis.[1, 2]



ACPA (Citrullinated proteins)

ACPA antibodies are widely used in clinical practice as part of the ACR criteria (American College of Rheumatology) for RA. The use of IMTEC-Arthritis-LIA with four selected CP4 peptides allows a specific ACPA determination.

RF (Rheumatoid factors)

The major isotype in rheumatoid arthritis is IgM. RF-IgM can be detected in 70-80% of RA patients with established disease and in 17% of patients with early stage RA.[3]

RA33

The determination of RA33 specific antibodies increases the diagnostic accuracy and sensitivity of RA diagnosis. RA33 autoantibodies are independent from RF and ACPA contribution to the disease. As with ACPA and RF, anti-RA33 antibodies may be present in the initial stages of the disease. Additionally, the occurrence of RA33 specific antibodies is correlated to a mild disease progression.[2]

Anti-nuclear antibodies

RA diagnosis is supported by the ANA parameters dsDNA, SS-A and SS-B for differential diagnoses. SS-A antibodies are found in up to 15% of RA patients.[3]

Algorithm for the diagnosis of rheumatoid arthritis

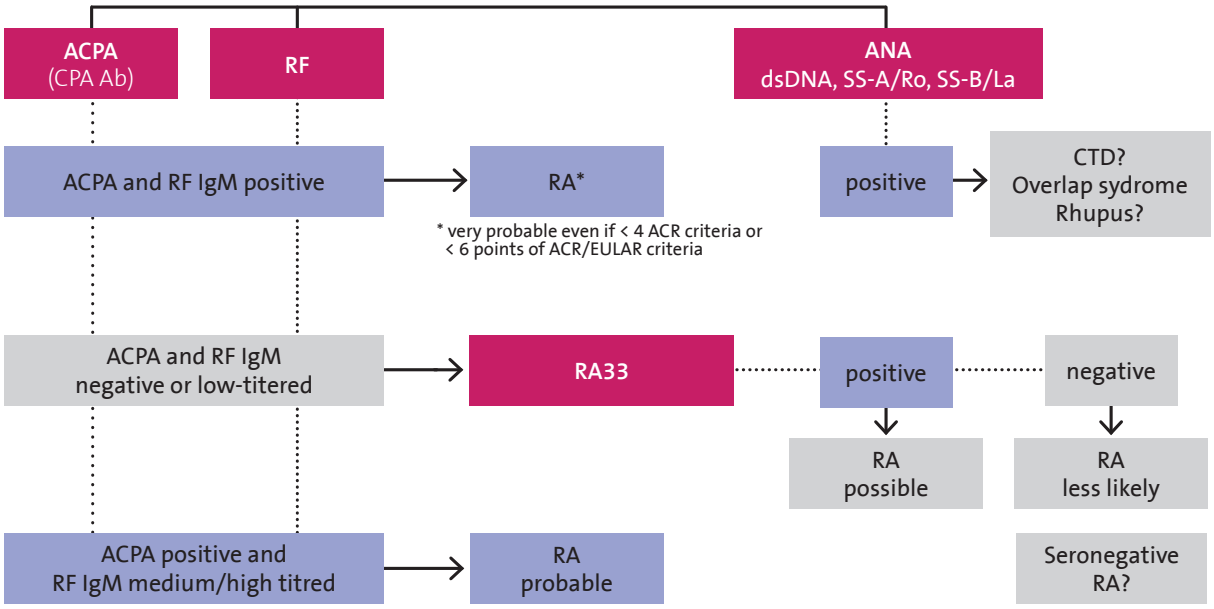


Figure modified from Conrad K. et al.[3]

Parameters that can be determined with IMTEC Arthritis-LIA are shown in red.

Ordering information

IMTEC-Arthritis-LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration
ITC94000	IgG / RF-IgM	24 tests	RF-IgM, ACPA (CP4–1-4), RA33, dsDNA, SS-A/Ro 60 SS-A/Ro 52, SS-B/La	10	Qualitative internal function and cut-off control

Automation with HumaBlot 44^{FA}

HumaBlot 44^{FA} is a fully automated system for processing line immunoassays. It performs all steps from processing automatic sample dilutions and reagents, to scanning strips and reporting test interpretations. With a complete walk-away solution, a flexible number of tests and up to 44 tests per run, it is optimally suited for labs from low to high throughput and labs with high quality assurance requirements.

For more information **www.human.de/humablot44fa**

1. Steiner et al. Autoimmunity 2006; 7:8-10
2. Nell,et all. Autoantibody profiling as early diagnostic and prognostic tool for rheumatoid arthritis. Ann Rheum Dis. 2005. 5:64; 1731
3. Conrad K. et al., Autoantibodies in systemic autoimmune diseases – A diagnostic reference Vol.2, third edition Pabst Science Publishers, Lengerich, 2015

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HUMAN Gesellschaft für Biochemica und Diagnostica mbH · Max-Planck-Ring 21 · 65205 Wiesbaden · Germany
Tel. +49 6122-9988-0 · Fax +49 6122-9988-100 · e-mail: human@human.de · www.human.de