

Rheumatoid Arthritis, Diagnostic Panel



To ascertain an earlier definitive diagnosis of Rheumatoid Arthritis, two tests are more conclusive than one.

Test Code: 17669
Panel contains Anti-CCP and Rheumatoid Factor (RF)

Specimen Requirements: Serum 3 mL

The Rheumatoid Arthritis Diagnostic Panel combines Rheumatoid Factor (RF) and Anti-Cyclic Citrulinated Peptide (Anti-CCP) to help you diagnose Rheumatoid Arthritis (RA) in patients with early, undifferentiated oligo- and polyarthritis.

The panel helps provide a more definitive diagnosis than RF alone, with almost 100% positive predictive value (PPV).

- ◆ The presence of both RF and Anti-CCP in the same patient increases the likelihood that the patient has RA to **95-99%**^{1,2}
- ◆ Patients with positive Anti-CCP and negative RF results may indicate early detection of RA.
- ◆ RF alone is not always indicative of RA since RF is detected in many other autoimmune diseases

Sensitivity and Specificity of Anti-CCP and RF³

	Anti-CCP	RF
Sensitivity %	66	72
Specificity %	90	80

³Lee DM, Schur PH, Clinical utility of anti-CCP assay in patients with rheumatic diseases. *Ann Rheuma Dis.* 2003; 62:870- 74.



The Rheumatoid Arthritis Diagnostic Panel is used by rheumatologists to help obtain an earlier definitive diagnosis of Rheumatoid Arthritis.

RF and especially Anti-CCP can be detected years before the onset of symptoms. In studies of blood donors, sensitivity of Anti-CCP detection for future development of RA ranged from 29% to 37% with specificity of greater than or equal to 98%.⁸

- ♦ When testing with RF alone, RA cases may not be diagnosed early enough to prevent irreversible damage.
- ♦ The combination of Anti-CCP and RF provides greater sensitivity than either assay alone and is, therefore, useful in the diagnostic work-up of suspected RA.^{7,9}
- ♦ In patients with RA and a negative test for RF (20-30% of the RA population), a positive test for Anti-CCP provides support for an RA diagnosis in 35% of such cases.⁷

With your next case of undifferentiated arthritis, choose the Rheumatoid Arthritis Diagnostic Panel to help obtain an earlier and more definitive diagnosis for your patient.

Presence of Anti-CCP and RF in various rheumatic diseases and controls:

Population	Sample Size	Percent Positive *	
		Anti-CCP	RF
Rheumatoid Arthritis ²	231	74	70
SLE ⁴	201	6	13
Primary Sjögren's Syndrome ⁵	134	8	59
HCV-Related Cryoglobulinemia ⁶	29	7	76
Osteoarthritis ²	40	8	13
Healthy Donors ⁷	154	15	7

* Percentage shown is based on specific reference cited.

For additional information on the Rheumatoid Arthritis Diagnostic Panel, call 1-877-803-1010 or 317-803-1010.

¹Bizzaro N, Mazzanti G, Tonutti E, et al. Diagnostic accuracy of the anti-citrilline antibody assay for rheumatoid arthritis. *Clin. Chem.* 2001; 47:1089-1093 Erratum in: *Clin Chem.* 2001; 47:1748.

²Sauerland U, Becker H, Seidel M, et al. Clinical utility of the anti-CCP assay; experience with 700 patients. *Ann NY Acad Sci.* 2005; 1050:314-318.

⁴Hoffman IE, Peene I, Cebecauer L, et al. Presence of rheumatoid factor and antibodies to citrullinated peptides in systemic lupus erythematosus. *Ann Rheum Dis.* 2005; 64:330-332.

⁵Gottenberg JE, Mignot S, Nicaise-Rolland P, et al. Prevalence of anti-cyclic citrullinated peptide and anti-keratin antibodies in patients with primary Sjögren's syndrome. *Ann Rheum Dis.* 2005; 64:114-117. 9 Goldbach-Mansky R, Lee J, McCoy A, et al. *Arthritis Res* 2000; 2:236-43.

⁶Wener MH, Hutchinson K, Morishima C, et al. Absence of antibodies to cyclic citrullinated peptide in sera of patients with hepatitis C virus infection and cryoglobulinemia. *Arthritis Rheum.* 2004; 50:2305-2308.

⁷Vallbracht I, Rieber J, Oppermann M, et al. Diagnostic and clinical value of anti-cyclic citrullinated peptide antibodies compared with rheumatoid factor isotypes in rheumatoid arthritis. *Ann Rheum Dis.* 2004; 63:1079-1084.

⁸Nielen MM, van Schaardenburg D, Reesnik HW, et al. Specific autoantibodies precede the symptoms of rheumatoid arthritis; a study of serial measurements in blood donors. *Arthritis Rheum.* 2004; 50:380-386.

⁹Visser H, le Cessie S, Vox K, et al. How to diagnose rheumatoid arthritis early; a prediction model for persistent (erosive) arthritis. *Arthritis Rheum.* 2002; 46:357-365.