

NEW ELISA TEST TO DETECT ANTIBODIES AGAINST CHIMERIC VIMENTIN PEPTIDES FOR THE EARLY DIAGNOSIS OF RHEUMATOID ARTHRITIS

The present invention relates to a new ELISA test that uses chimeric citrullinated peptides derived from vimentin/fibrin or vimentin/filaggrin chains for early diagnosis of rheumatoid arthritis. The test has shown 91% specificity in studies performed with sera from 100 patients, being able to detect the disease when other tests failed.

BACKGROUND

Rheumatoid arthritis (RA) is a systemic autoimmune disease affecting 1% of the world population producing chronic joint inflammation, usually resulting in its destruction. Early diagnosis is mandatory to impair the disease progression by drugs, physiotherapy and, eventually, surgery.

TECHNOLOGY DESCRIPTION

The research group has developed a new ELISA test that consists of new quimeric citrullinated peptides, containing a sequence with homology to some aminoacids of vimentin and another sequence with homology to some aminoacids of the α -fibrin or the filaggrin (alternatively), covalently bonded.

ADVANTAGES

- The chimeric peptides based in citrullinated fibrin/filaggrin-vimentine peptides show high sensitivity and specificity to detect rheumatoid arthritis.
- This test is able to diagnose positive RA in sera of patients not detected by other commercial and non-commercial developed tests.
- Improved prognostic: patients containing antibodies to these peptides show higher rate of erosive disease and less remission of the disease.
- Very useful in combination with other peptides to increase the sensitivity in the identification of particular subsets of RA patients.

CURRENT STAGE OF DEVELOPMENT

Test has been performed in serum of 100 RA patients. These peptides have shown a 91% specificity and 77% sensitivity.

GOAL

We are searching companies interested in the acquisition of the license, the further co-development of the kit and the commercialization of the product.

PATENT

Spanish patent application filed in July 2011 by CSIC and Hospital Clínic de Barcelona.

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