



Biomnis

Auto-immune disorders affect over 7% of the population. They are the 3rd largest cause of morbidity in industrialised countries (after cardiovascular diseases and cancers) and can affect people of any age.

Auto-immune disorders are due to malfunctions of the immune system which result in the manufacture of antibodies, and in some cases, lymphocytes, that act against the body's own cells. As a result, each and every organ can be affected. There are multiple factors accounting for the origin of auto-immune disorders with the involvement of genetic, endogenetic and environmental factors.



Diagnosis of auto-immune disorders

Diagnosis of an auto-immune disorder is based mainly on: clinical symptoms, immunological diagnosis and in some cases, genetic diagnosis. These debilitating disorders are often severe and at times life-threatening. Often affecting young subjects, hence the importance of correctly screening for auto-antibodies that are vital for diagnosis in the presence of relevant clinical signs.

The auto-immunity serology tests performed by Eurofins Biomnis can assist you in making a quick and reliable diagnosis to improve the treatment of your patients.

Key

Auto-antibodies with a high diagnostic value are shown in blue.

HLA genotyping can be a diagnostic support for several auto-immune diseases (for any additional information, please consult our website www.eurofins-biomnis.com).

Pathology ▼	Antibody ▼
Systemic disorders	
Disseminated erythematous lupus (DEL)	Anti-nuclear antibodies Native anti-DNA Ab Anti-nucleosome Ab Anti-ENA Ab (Sm, RNP, SSA) Anti-ribosomes Ab Anti-PCNA Ab Anti-C1q Ab Circulating immune complexes
Drug-induced lupus	Anti-nuclear antibodies Anti-histones Ab
Gougerot-Sjögren Syndrome	Anti-nuclear antibodies Anti-SSA/Ro 60, SSB Ab Anti-SSA/Ro 52 Ab = anti-TRIM 21
Mixed connectivty	Anti-nuclear antibodies Anti-RNP Ab
Myositis, Anti-synthetase syndrome	Anti-Jo1 Ab Anti-PL7 Ab, PL12, Ku, Mi2 Anti-SRP Ab Anti-Pm-Scl Ab Anti-OJ Ab, EJ, TIF/p155/140, MDA-5/CADM 140, NXP2, SAE, HMG-coA reductase
Exclusion diagnosis	DFS 70
Diffuse systemic scleroderma	Anti-nucleolar Ab Anti-Scl70 Ab = topo isomerase Anti-fibrillarin Ab Anti-RNA polymerase III Ab
Overlapping syndrome	Anti-Pm-Scl Ab Anti-Ku Ab
Limited systemic scleroderma (formerly CREST syndrome)	Anti-centromere Ab (A/B) Anti-Th/To Ab Anti-NOR Ab
Antiphospholipid syndrome	Anti-β2 glycoprotein 1 IgG/IgM Ab Anti-cardiolipin IgG/IgM Lupus anticoagulant Anti-phosphatidylethanolamine IgG/IgM Ab Anti-phosphatidylserine IgG Ab Anti-prothrombin IgG Ab Anti-annexin V IgG Ab
Rheumatoid polyarthrits	Anti-cyclic citrullinated peptide Ab (anti-CCP) Rheumatoid factors IgM Rheumatoid factors IgA

Pathology ▼	Antibody ▼
Liver	
Primary biliary cirrhosis	Anti-mitochondrial type 2 Ab, pyruvate deshydrogenase complex = PDH Anti-gp210 Ab (nuclear pores) Anti-SP100 Ab (nuclear dots)
Type 1 auto-immune hepatitis	Anti-smooth muscle Ab, type anti-actin Anti-soluble liver antigen Ab = SLA/LP
Type 2 auto-immune hepatitis	Endoplasmic reticulum Ab = Anti-liver kidney microsomal Ab = anti-LKM 1) Anti-cytochrome P450 II D6 Ab Anti-cytosol Ab = anti-LC1
Primary sclerosing cholangitis	Anti-neutrophil cytoplasmic antibodies, type X or p-ANCA
Stomach	
Type A gastritic anaemia (Biermer's anaemia)	Intrinsic factor Ab Anti-parietal cell antibodies Anti H+K+ ATPase Ab
Pancreas	
Insulin-dependent diabetes	Anti-islets of Langerhans Ab Anti-glutamate-decarboxylase Ab = GAD Anti-tyrosine-phosphatase Ab = IA2 Anti-ZnT8 Ab Anti-Insulin Ab
Auto-immune pancreatitis	Anti-lactoferrin and carbonic anhydrase Ab
Intestines	
Coeliac disease = gluten intolerance	Anti-transglutaminase IgA/IgG antibodies Anti-endomysium IgA/IgG Ab Anti-gliadin IgA/IgG Ab
Crohn's disease	Anti-saccharomyces cerevisiae IgA/IgG Ab = ASCA Exocrine anti-pancreas Ab
Haemorrhagic rectocolitis	Anti-neutrophil cytoplasmic antibodies, type X or p-ANCA
Thyroid	
Graves' disease	Anti-TSH receptor Ab = TSI = LATS = TRAK
Hashimoto thyroiditis, primary myxoedema	Anti-thyroperoxydase Ab = TPO Anti-thyroglobulin Ab = Tg

Pathology ▼	Antibody ▼
Kidney/Lung	
Goodpasture syndrome	Anti-glomerular basement membrane Ab (not to be confused with anti-epidermal basement membrane and intracellular substance antibodies)
Granulomatosis with polyangiitis (also known as Wegener's granulomatosis)	Anti-neutrophil cytoplasmic Ab (or ANCA), type anti-proteinase 3 = PR3
Eosinophilic granulomatous, microscopic polyangiitis with polyangiitis (formerly Churg and Strauss diseases), extra-capillary glomerulonephritis, etc.	Anti-neutrophil cytoplasmic antibody (or ANCA), type anti-myeloperoxidase = MPO
Idiopathic extra-membranous glomerulonephritis	Anti-PLA2R Ab

Adrenal/Ovaries/Testicles	
Addison's disease	Anti-adrenal gland antibodies Anti-21 hydroxylase Ab
Early menopause Hypofertility	Anti-ovarian Ab Anti-testicular Ab

Nervous system	
Myasthenia	Acetylcholine anti-receptor antibodies Anti-MuSK Ab Anti-striated muscles Ab Anti-titin Ab
Lambert-Eaton myasthenic syndrome	Anti-Voltage Gated Calcium Channel (VGCC) antibodies
Isaacs' syndrome	Anti-potassium channel Ab (VGKC), Lgi1 and Caspr2
Stiff-man syndrome	Anti-glutamate-decarboxylase Ab = GAD Anti-amphiphysin Ab
Peripheral neuropathies	Anti-myelin Ab Anti-MAG Ab Anti-gangliosides IgG/IgM Ab (GM1, GM2, GD1a, GD1b, GD3, GT1b, GQ1b, etc.)
Devic's disease	Antioptic neuromyelitis/NMO Ab = aquaporin 4
Spectrum of MOG antibody-associated disorders	Anti-MOG Ab
Paraneoplastic syndromes	Anti-neurones Ab: Hu, Ri, Yo, amphiphysin, CV2, Ma2, SOX1, zic4, Tr
Limbic encephalitis	anti-NMDAr Ab, AMPAr, VGKC, GAD, neurones

Pathology ▼	Antibody ▼
Skin	
Pemphigus	Anti-intracellular substance antibodies = desmosomes Anti-desmoglein Ab 1 and 3
Bullous pemphigoid	Anti-epidermal basement membrane and intracellular substance antibodies (not to be confused with anti-glomerular basement membrane Ab)
Gestational pemphigoid	Anti-BP 180 Ab Anti-BP 230 Ab
Epidermolysis bullosa	Anti-dermal basement membrane antibodies Anti-collagen VII Ab
Paraneoplastic pemphigus	Anti-envoplakin antibodies
Herpetiform dermatitis	Anti-transglutaminase IgA/IgG antibodies Anti-endomysium IgA/IgG Ab
Subacute cutaneous lupus	Anti-SSA/Ro 60 Ab

Parathyroidism	
Hypoparathyroidism	Anti-calcium sensing receptor (CaSR) Ab

Eye	
Retinopathies	Anti-recoverin Ab

ear/cartilage	
Meniere's disease	Type 2 anti-collagen Ab
Atrophic polychondritis	Type 2 anti-collagen Ab

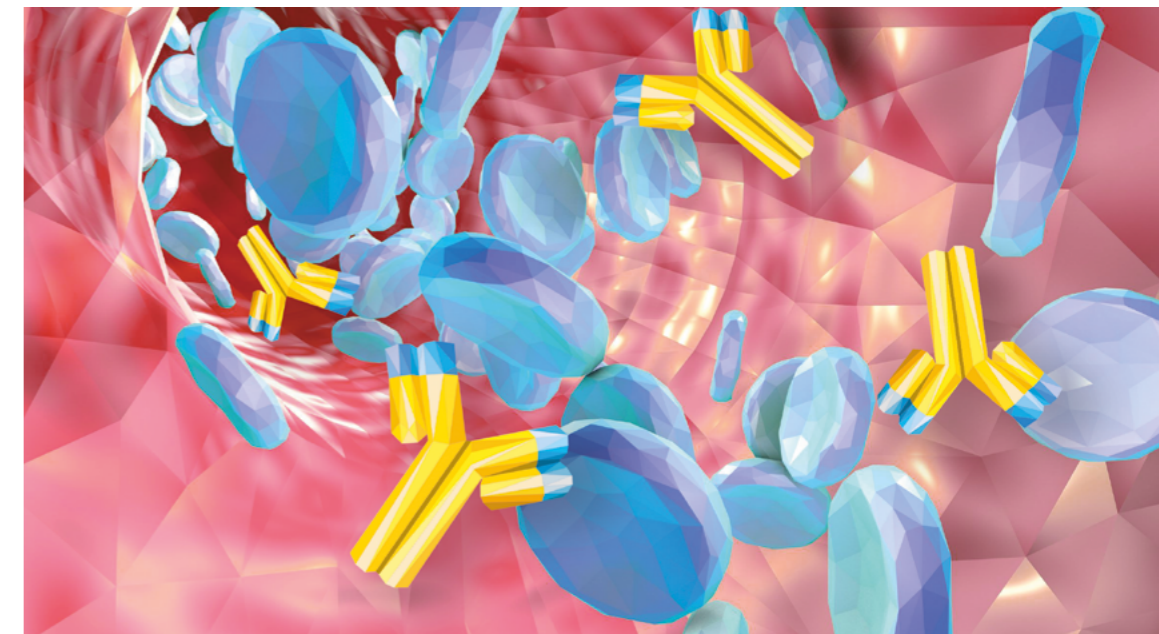
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Autoantibodies in the diagnosis and follow-up of auto-immune diseases