

AUTOIMMUNE PRODUCTS

SUITED FOR THE DEVELOPMENT OF DIAGNOSTIC ASSAYS
DETECTING LOCALIZED AND SYSTEMIC AUTOIMMUNE DISORDERS

Autoimmune diseases are a broad range of related diseases in which a person's immune system produces an inappropriate response against its own cells, tissues and/or organs, resulting in inflammation and damage.

There are over 80 different autoimmune diseases, and these range from common to very rare diseases. Some autoimmune diseases affect mainly one part of the body (e.g. organ-specific such as multiple sclerosis which attacks the nervous system, autoimmune thyroid disease, and Crohn's disease which is localized to the gastrointestinal tract) whilst others are systemic (such as systemic lupus erythematosus, rheumatoid arthritis and systemic vasculitis).

Systemic autoimmune diseases can affect many body organs and tissues at the same time and they are broadly classified into rheumatological/connective tissue disease and vasculitis (inflammation of blood vessels). Autoimmune diseases collectively affect approximately 5% to 10% of the population of the developed world. Common autoimmune diseases such as thyroiditis, rheumatoid arthritis and diabetes affect more than 1 in 100 people. In contrast, a rare autoimmune disease such as Goodpasture's disease (a form of vasculitis) affects around 1 in a million people. Autoimmune diseases disproportionately affect women at a rate of 2-9x greater than for men.



Diagnosics

Autoimmune diseases are usually diagnosed using a combination of clinical history, blood tests (autoantibodies, inflammation, organ function) and other investigations such as x-rays. Specifically, autoantibodies act as biomarkers helping to diagnose disease subsets and monitor autoimmune diseases. Many autoantibodies have well-defined target antigens and can be detected with high analytical sensitivity for a particular disease.

Category	Disease	Tests
Connective Tissue Disease	Includes rheumatoid arthritis, systemic lupus erythematosus (SLE), scleroderma, and other systemic autoimmune diseases.	<ul style="list-style-type: none">• Anti-cytoplasmic antigens (c-ANCA)• Perinuclear antigens of neutrophils (p-ANCA)
Vasculitis	Inflammation in the blood vessels which can lead to serious consequences such as aneurysms.	<ul style="list-style-type: none">• Anti-cardiolipin• Anti-β2 glycoprotein 1• Anti-prothrombin (aPT)
Antiphospholipid	Blood clotting disorders, such as Antiphospholipid Syndrome (APS) which is a hypercoagulable state caused by antiphospholipid antibodies.	<ul style="list-style-type: none">• Cardiolipin• β2-glycoprotein 1
Gastrointestinal	Localized disorders that attack the gastrointestinal track such as Celiac Disease, Crohn's Disease, Ulcerative Colitis or Inflammatory Bowel Disease (IBS).	<ul style="list-style-type: none">• Tissue transglutaminase (tTG)• Liver-kidney microsomal type 1 (LKM-1)• pANCA
Endocrine	Thyroid diseases (e.g. Hashimoto's and Graves' diseases), diabetes, adrenal fatigue, osteoporosis, infertility, polycystic ovary syndrome, and several others. Hashimoto's and Graves' disease are the most common autoimmune diseases.	<ul style="list-style-type: none">• Glutamic acid decarboxylase (GAD)• Tyrosine phosphatase-like islet cell antigen (IA2)• Thyroid peroxidase (TPO)• Thyroglobulin



RHEUMATOLOGY

CONNECTIVE TISSUE DISEASE

Sm/RNP Ag

A3C304B	Native Ag (Calf Thymus) >90%
K07102H	Human anti-RNP Ag (Human Plasma)

Sm (Smith) Ag

R01695	SmD2, Rec. Ag (Insect Cells) >85%
A3C303B	Native Ag (Calf Thymus) >90%
K07108H	Human anti-Sm Ag (Human Plasma)

SS-A (Ro) Ag

A3C300B	Native Ag (Calf Thymus) >90%
K07103H	Human anti-Ro (SS-A) Ag (Human Plasma)

SS-B (La)

R01691	Rec. Ag (Insect Cells) >85%
A3C022B	Native Ag (Calf Thymus) >95%
K07104H	Human anti-SS-B Ag (Human Plasma)

Scl-70

A3C301B	Native Ag (Calf Thymus) >90%
K07105H	Human anti-Scl-70 Ag (Human Plasma)

Jo-1

A3C302B	Native Ag (Calf Thymus) >90%
K07101H	Human anti-Jo-1 Ag (Human Plasma)

Ribosomal P-proteins

R01694	P1, Rec. Ag (Insect Cells) >85%
R01692	P2, Rec. Ag (Insect Cells) >85%
A01676B	Native Ag (Calf Thymus) >90%
K07107H	Human anti-Ribosomal P Ag (Human Plasma)

dsDNA

A01677E	Native Ag (<i>E.coli</i>) >90%
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Ro52

R01649	Rec. Ag (Sf21 Insect Cells) >90%
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Proliferating Cell Nuclear Ag (PCNA)

R01690	Rec. Ag (Insect Cells) >85%
R01648	Rec. Ag (Sf21 Insect Cells) >90%
M1M20-912	MAB to PCNA
MAM21-964	MAB to PCNA

Histone

A01673B	Native Ag (Calf Thymus) >90%
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Complement C1q

A01670H	(Human Plasma) >95%
K90020C	Sheep anti-Complement C1q

C3

L01240G	Goat anti-C3
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C4

L01241G	Goat anti-C4
L01243G	Goat anti-C4

U1-snRN C

R01693	Rec. Ag (Insect Cells) >85%
G01314M	MAB

VASCULITIS

Annexin

A01682H	Native Ag (Human neutrophils)
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Bacterial permeability increasing factor (BPI)

A01678H	Native Ag (Human neutrophils) >90%
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Cathepsin G

A01679H	Native Ag (Human neutrophils)
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Lactoferrin

A01712H	Native Ag (Human Milk)
H01411M	MAB to Lactoferrin (pair, LF assay)
H01412M	MAB to Lactoferrin (pair, LF assay)
K99172C	Rabbit anti-Human Lactoferrin

Lysozyme

A50178H	Native Ag (Human neutrophils) >95%
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Myeloperoxidase (pANCA)

A3C181H	Native Ag (Human neutrophils) >95%
K50891R	Rabbit anti-Myeloperoxidase

Prothrombin

A01681H	Native Ag (Human Plasma) >95%
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Proteinase 3 (cANCA)

A3C192H	Native Ag (Human neutrophils) >90%
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ANTI-PHOSPHOLIPID SYNDROME

β2-GLYCOPROTEIN-1

A3C083H	Native Ag (Human Plasma) >95%
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GASTROENTEROLOGY

CELIAC DISEASE

Tissue Transglutaminase (tTG)

A01363H	Rec. Ag (HEK 293-EBNA Cell Line) >95%
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CHRONIC INFLAMMATORY BOWEL DISEASE

Calprotectin

A01671H	Native Ag (Human neutrophils)
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NEPHROLOGY

GOODPASTURE'S SYNDROME

Glomerular Basement Membrane (GBM)

A01672B	Native Ag (Bovine Kidney) >90%
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ENDOCRINOLOGY

THYROID DISEASE

Thyroid Peroxidase (TPO)

A01309H	Rec. Ag >95%
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Thyroglobulin (TG)

H6T09-212	Recombinant Ag >96%
A86852H	Native Ag (Human Thyroid Tissue) >90%

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