HUMAN Diagnostics

Autoimmune DX Product Catalog 2019

IMTEC

Human

Diagnostics Worldwide

HUMAN Diagnostics

Autoimmune DX Product Catalog 2019

Human

Diagnostics Worldwide

HUMAN Autoimmune DX

Quality Made in Germany

HUMAN offers innovative test systems for autoimmune diseases in the field of laboratory diagnostics. For 30 years, the brand name IMTEC has been synonymous for high-quality and future-oriented products in the field of autoimmune diagnostics.
IMTEC ELISA and line Immunoassays are produced by a team of highly specialized and dedicated scientists at the HUMAN Competence Center for Research and Development in Magdeburg.
The focus is on the development and optimization of high-performance line immunoassays with the associated automation systems. The IMTEC product range offers solutions for small laboratories with low sample throughput as well as for high throughput laboratories.
Several patented processes and the worldwide growing demand for our products are proof of our reliability and innovation.
The entire IMTEC product line is CE certified and is distributed worldwide by our qualified partners.

HUMAN bietet innovative Testsysteme für Autoimmunerkrankungen im Bereich der Labordiagnostik an. Der Markenname IMTEC steht seit 30 Jahren für qualitativ hochwertige und zukunftsorientierte Produkte im Bereich der Autoimmundiagnostik.
IMTEC ELISA und Line Immunoassays werden von einem Team hoch spezialisierter und engagierter Wissenschaftler im HUMAN Kompetenzzentrum für Forschung und Entwicklung in Magdeburg produziert.
Der Schwerpunkt liegt auf der Entwicklung und Optimierung leistungsfähiger Line Immunoassays mit den zugehörigen Systemen zur Automatisierung.
Die IMTEC Produktpalette bietet sowohl Lösungen für kleine Labore mit niedrigem Probendurchsatz, als auch für Hochdurchsatzlabore.
Mehrere patentierte Verfahren und die weltweit stetig wachsende Nachfrage nach unseren Produkten sind der Beweis für Zuverlässigkeit und Innovation.
Die gesamte IMTEC Produktlinie ist CE zertifiziert und wird weltweit von unseren qualifizierten Partnern vertrieben.

HUMAN offre des systèmes de tests innovants pour les maladies auto-immunes dans le cadre des diagnostics de laboratoire. Depuis 30 ans, la marque IMTEC est synonyme de produits de haute qualité orientés vers l'avenir dans le domaine de diagnostic des maladies auto-immunes.

Les dosages ELISA et les immunodosages en ligne de IMTEC sont produits dans le Centre de compétence Recherche et Développement de HUMAN à Magdebourg par une équipe de scientifiques hautement spécialisés et engagés.

L'accent est mis sur le développement et l'optimisation d'immunodosages en ligne à haute performance avec les systèmes d'automatisation associés. La gamme de produits IMTEC offre des solutions pour les petits laboratoires à faible débit d'échantillon ainsi que pour les grands laboratoires à haut débit. Plusieurs procédés brevetés et la demande mondiale croissante de nos produits témoignent de notre fiabilité et innovation.

Toute la gamme de produits IMTEC porte la marque CE et est distribuée dans le monde entier par nos partenaires qualifiés.

HUMAN ofrece sistemas innovadores para pruebas de enfermedades autoinmunes dirigidos al sector de diagnóstico de laboratorio clínico.

La marca IMTEC es desde hace 30 años un referente de productos de alta calidad orientados al futuro en el diagnóstico autoinmune.

Un equipo formado por científicos especializados y comprometidos produce la línea IMTEC ELISA y la línea de inmunoensayos lineales en nuestro centro de competencia de investigación y desarrollo de Magdeburgo. El objetivo es desarrollar y optimizar inmunoensayos lineales de alto rendimiento asociados a sistemas automatizados. La gama de productos IMTEC ofrece soluciones para laboratorios clínicos de alta y baja capacidad.

Varios procesos patentados y la creciente demanda global de nuestros productos son una fiel prueba de nuestra credibilidad e innovación.

Todos los productos de la línea IMTEC están certificados con la marca CE y se distribuyen en todo el mundo de la mano de socios distribuidores cualificados y con gran experiencia.

HUMAN Group

Global player. Local solutions. Individual support.

With its worldwide network of subsidiaries and distributors HUMAN guarantees being close to the users, providing service and support.

Distribution areas are dark grey colored.

Germany based offices

1 Headquarters

HUMAN Gesellschaft für Biochemica und Diagnostica mbH

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Labor BioMedical Technologies GmbH

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Phone: +49 4102 47950
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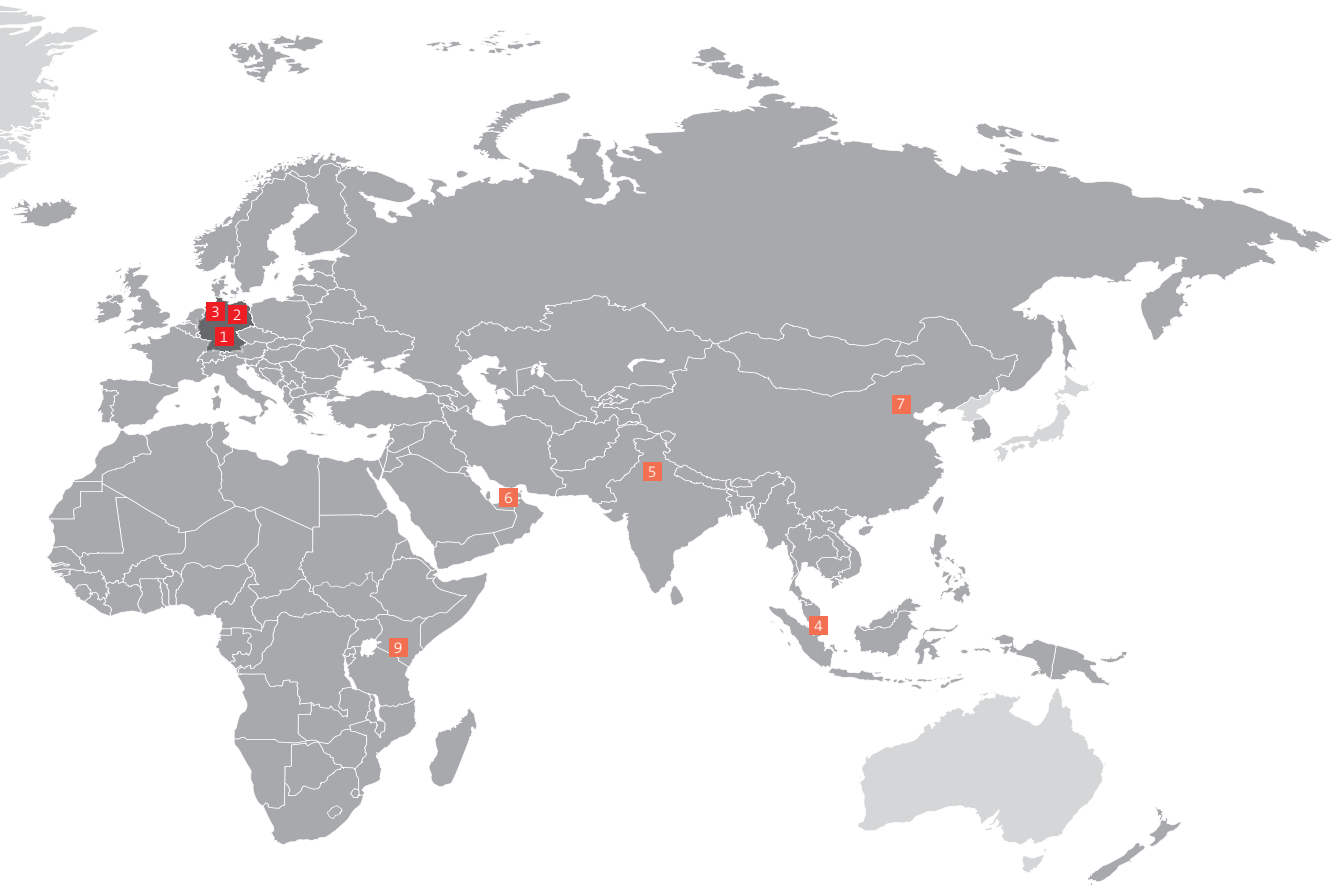

Regional offices and training centre

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Committed to Quality

Quality is the essence

For HUMAN, quality is not simply a phrase, it is the essence of our philosophy. Over the past 45 years HUMAN has always acted in accordance with internationally recognized quality standards.
Today HUMAN's facilities, processes and products are in full compliance with the highest quality standards – the IVD Directive (CE Mark) and ISO 13485:2016.

A certified quality management system in accordance with the international standards DIN EN ISO 9001:2015 and DIN EN ISO 13485:2016, guarantees that all our products are designed, manufactured, controlled and delivered to exceed the requirements and high expectations of our customers worldwide.

HUMAN's quality management system has proven to be equivalent with GMP requirements as demonstrated by successfully passed inspections from other authorities.

Certificate

mdc medical device certification GmbH
certifies that

Human

Gesellschaft für Biochemica und Diagnostica mbH
Max-Planck-Ring 21
65205 Wiesbaden
Germany

with the location

Stegelitzer Straße 3
39126 Magdeburg

for the scope

development, manufacturing and distribution of
in vitro diagnostic products and analyzers

has introduced and applies a

Quality Management System

The mdc audit has proven that this quality management system
meets all requirements of the following standard

EN ISO 13485

Medical devices – Quality management systems –
Requirements for regulatory purposes

EN ISO 13485:2016 + AC:2016 - ISO 13485:2016

Valid from	2019-03-12
Valid until	2022-03-11
Registration no.	D1030000073
Report no.	P18-01225-128829
Stuttgart	2019-03-01

Head of Certification Body

medical device certification mdc

mdc medical device certification GmbH
Kriegerstraße 6
D-70191 Stuttgart, Germany
Phone: +49-(0)711-253597-0
Fax: +49-(0)711-253597-10
Internet: http://www.mdc-ce.de

DAkkS Deutsche Akkreditierungsstelle D-ZM-16002-06-00

INTECHNICA CERT GmbH

CERTIFICATE

ISO 14001:2015

for

Human
Gesellschaft für Biochemica und Diagnostica mbH

at the sites

Max-Planck-Ring 21, 65205 Wiesbaden und
Stegelitzer Straße 3, 39126 Magdeburg

The DAU-accredited environmental verifier hereby certifies that the named organization
has implemented an Environmental Management System.

Scope: development, manufacturing and distribution of in vitro diagnostic products and analyzers

With an audit it has been assessed that the requirements of
ISO 14001:2015 are fulfilled.

Nürnberg, 30. August 2018

The follow-up certificate No. UGA 835-2018 is valid until 26. August 2021.

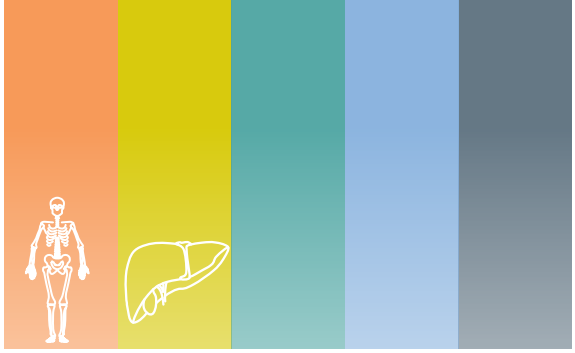
Carsten Speidel
Environmental Verifier

Dipl.-Phys. Reinhard Mirz
Environmental Verifier
Organisation, DE-V-0179

Intechnica Cert GmbH Umweltgutachterorganisation, Ostendstraße 181, 90482 Nürnberg

Environmental protection is our concern

HUMAN sincerely commits to the use of renewable energies and to environmental protection. Hence, an environmental management system according to international standard DIN EN ISO 14001:2015 and European standard EMAS (certificate on homepage) has been implemented in 2015.



Content

10 Autoimmune DX Technologies

10 LIA
11 ELISA
12 Rapid Screening

13 Rheumatology

14 **Connective Tissue Diseases**
Myositis, Systemic Sclerosis,
Sjögren´s Syndrome, Sharp-Syndrome

18 **Systemic Lupus Erythematosus**
Secondary Systemic Lupus Erythematosus
Neonatal Lupus Erythematosus
Congenital Heart Block

22 **Rheumatoid Arthritis | Juvenile Idiopathic Arthritis**

26 **Vasculitis**
Granulomatosis with Polyangiitis
Eosinophile Granulomatosis with Polyangiitis
Microscopic Polyangiitis
Goodpasture's Syndrome

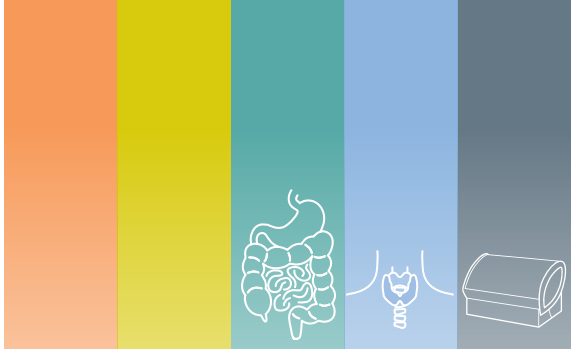
30 **Antiphospholipid Syndrome | Catastrophic APS**

34 **Circulating Immune Complexes**

36 **Reactive Arthritis**

38 Hepatology

Autoimmune Hepatitis
Primary Biliary Cirrhosis
Primary Sclerosing Cholangitis



43 Gastroenterology

Celiac Disease
Pernicious Anemia
Crohn´s Disease

48 Endocrinology

Thyroid Diseases

53 Instruments & Analyzers

54 **LIA**
Fully Automated LIA system
Devices for LIA Processing and Interpretation

56 **ELISA**
Workstation
Readers
Automated Analyzers

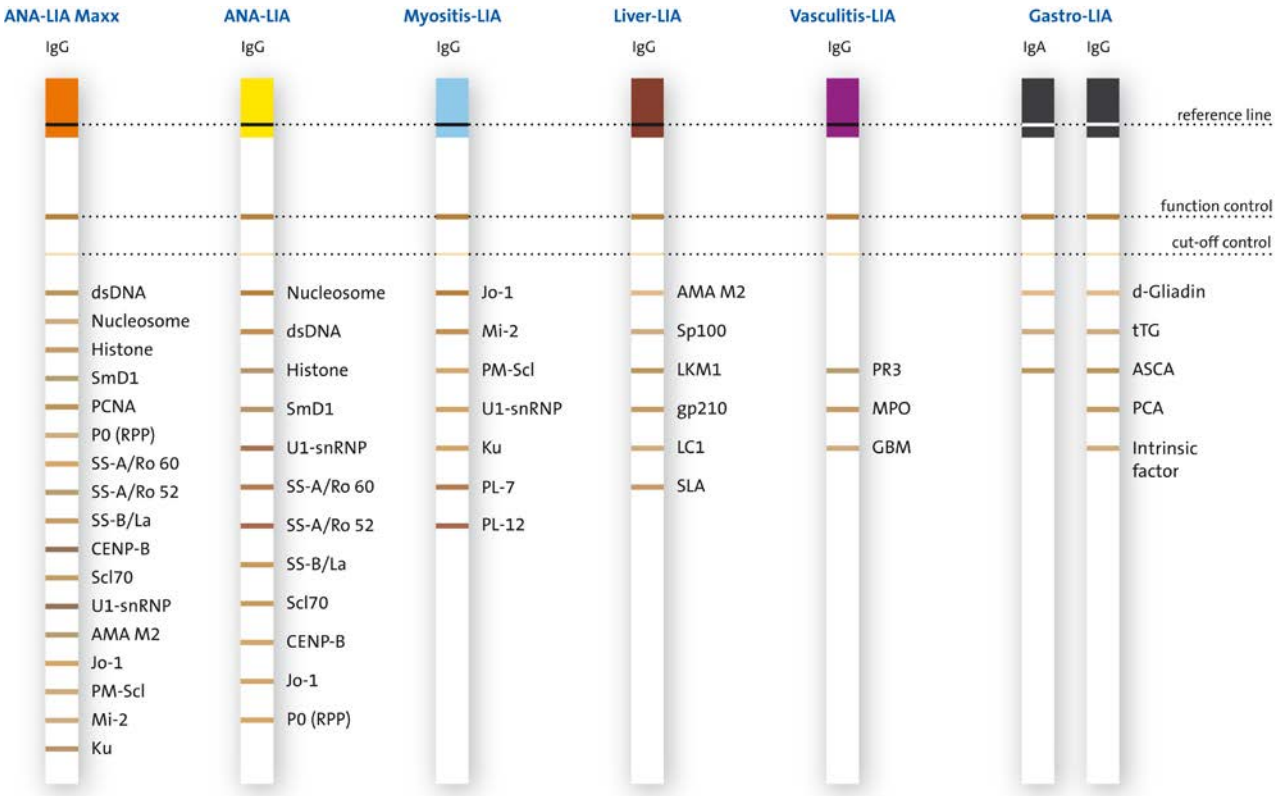
61 **Immunofluorescence**
Microscope

62 Appendix

Synonyms
Diseases and Diagnostic Solutions
Index

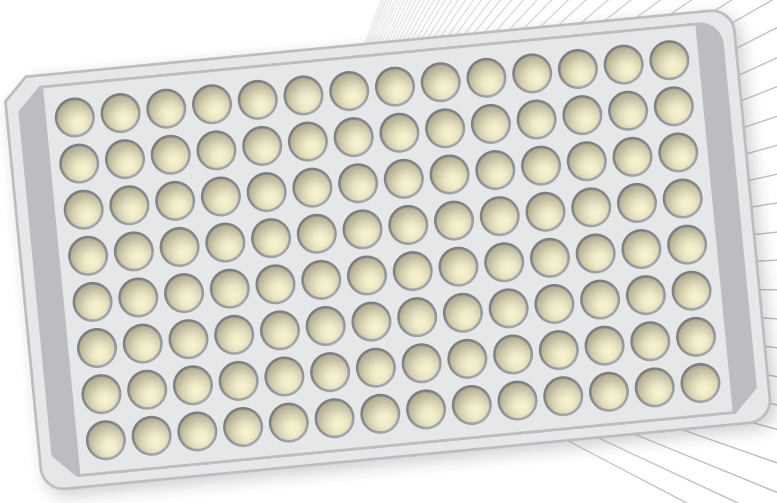
LIA Technology

Autoimmune diseases are characterized by autoantibody patterns found in patient sera. HUMAN's line immunoassays (LIAs) are developed for rapid autoantibody profiling. LIAs are easy to perform and interpret. By employing disease-specific antigens, up to 17 different autoantibodies can be differentiated with a single-shot assay. This state-of-the-art autoimmune diagnostic tool is produced by spotting antigens in lines on a nitrocellulose membrane.
Bound autoantibodies are visualized by using specific HRP-conjugated secondary antibodies that specifically target human antibodies and a LIA specific substrate. Samples positive for autoantibodies can be easily detected by comparing the pattern of brown lines to the standardized line (cut-off) that is also spotted on the LIAs. LIAs are ideal autoimmune diagnostic tools for screening and differential diagnosis as well as monitoring autoimmune patients by identifying specific autoantibodies in one shot.



ELISA Technology

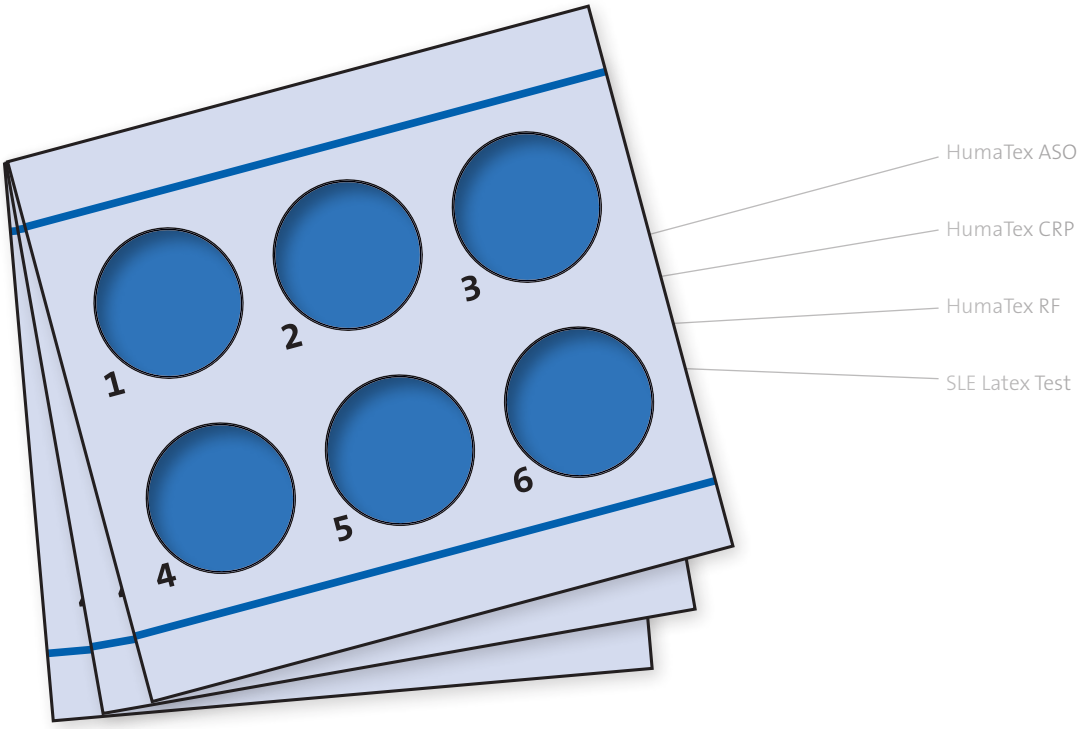
The HUMAN ELISAs offer a unique solution for all sizes of laboratories from low to high throughput. The ELISA line consists of 61 ELISAs (both qualitative and quantitative) for the differential diagnosis of autoimmune diseases. To offer the best solution for the requirements of each laboratory, HUMAN offers screening ELISAs for the detection of different subtypes (IgG, IgM, IgA) in one assay and single-parameter ELISAs for separate autoantigens. The quantitative ELISAs are ideally suited for the monitoring of disease progression. All ELISAs are optimized for automation and validated for use with HUMAN's automated ELISA instruments: Elisys Uno, Elisys Duo and Elisys Quattro. Handling is as simple as can be thanks to ready-to-use reagents, breakable microtiter wells and reagents largely interchangeable between different assays and lots. The incubation conditions are the same for almost all assays.



AMA M2
ANA
Annexin V
beta$_2$-glycoprotein 1
C1q
C1q-CIC
C3d-CIC
Cardiolipin
CCP
CENP-B
CIC
d-Gliadin
dsDNA
GBM
gp210
Histone
Jo-1
Ku
LKM-1
LPS
MPO
Nucleosome
oxLDL
P0 (RPP)
PCNA
Phosphatidic acid
Phosphatidylethanolamine
Phosphatidylinositol
Phosphatidylserine
PM-Scl
PR3
Prothrombin
RA33
RF
Salmonella
Scl70
SLA
SmD1
Sp100
SS-A/Ro 52
SS-A/Ro 60
SS-B/La
T3
T4
Thyroglobulin
Tissue transglutaminase
TPO
TSH-receptor
U1-snRNP

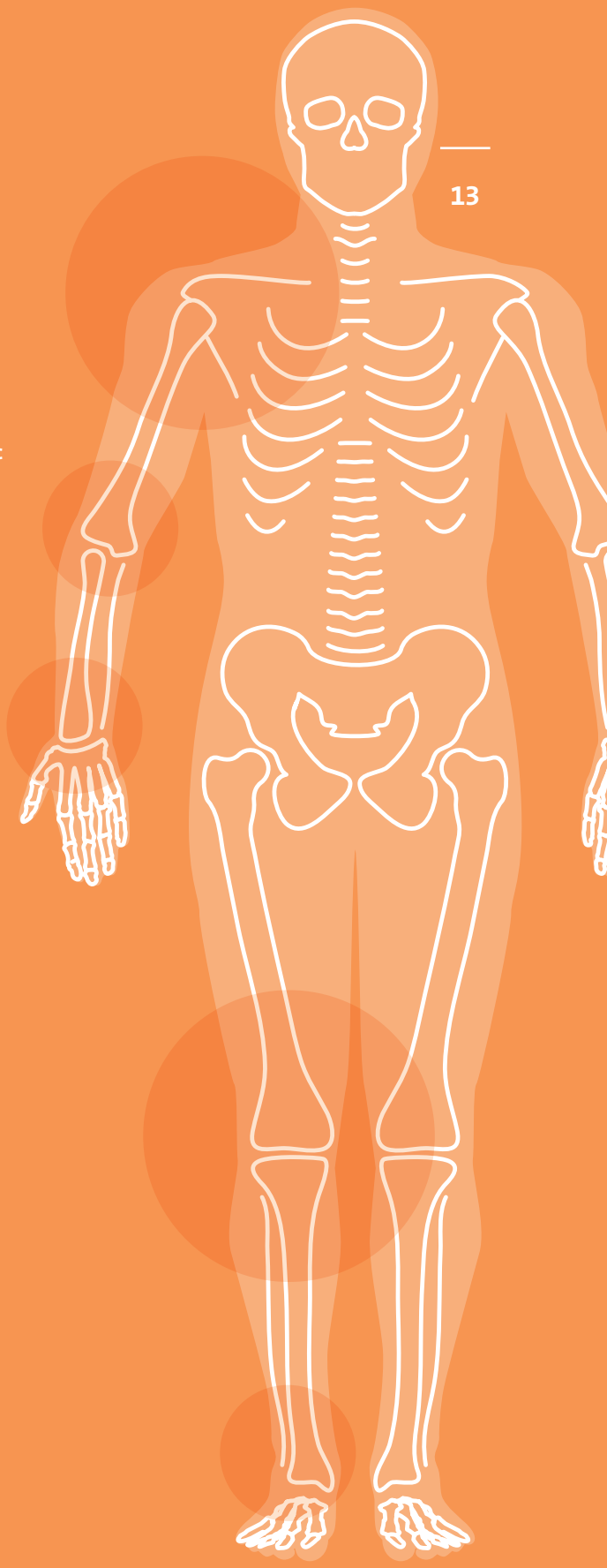
Rapid Screening Technology

HUMAN's autoimmune rapid screening tests use latex beads coated with disease relevant and specific antigens. In the presence of autoantibodies in patient serum, the latex beads agglutinate and provide results in less than 2 minutes. Rapid tests for screening are ideal for identifying potential autoimmune patients with rheumatic diseases quickly and easily.



Rheumatology

The field of rheumatology covers all systemic autoimmune rheumatic diseases (SARD) that target multiple tissues and/or organs, causing inflammation that can result in rashes, pain, discomfort and even death. The major targets of SARDs are, for instance, connective tissue, joints, muscles and blood vessels. After a first screen for antinuclear antibodies, ANA-LIA, ANA-LIA Maxx and quantitative ELISAs provide a basis to identify the specific SARD.



Connective Tissue Diseases

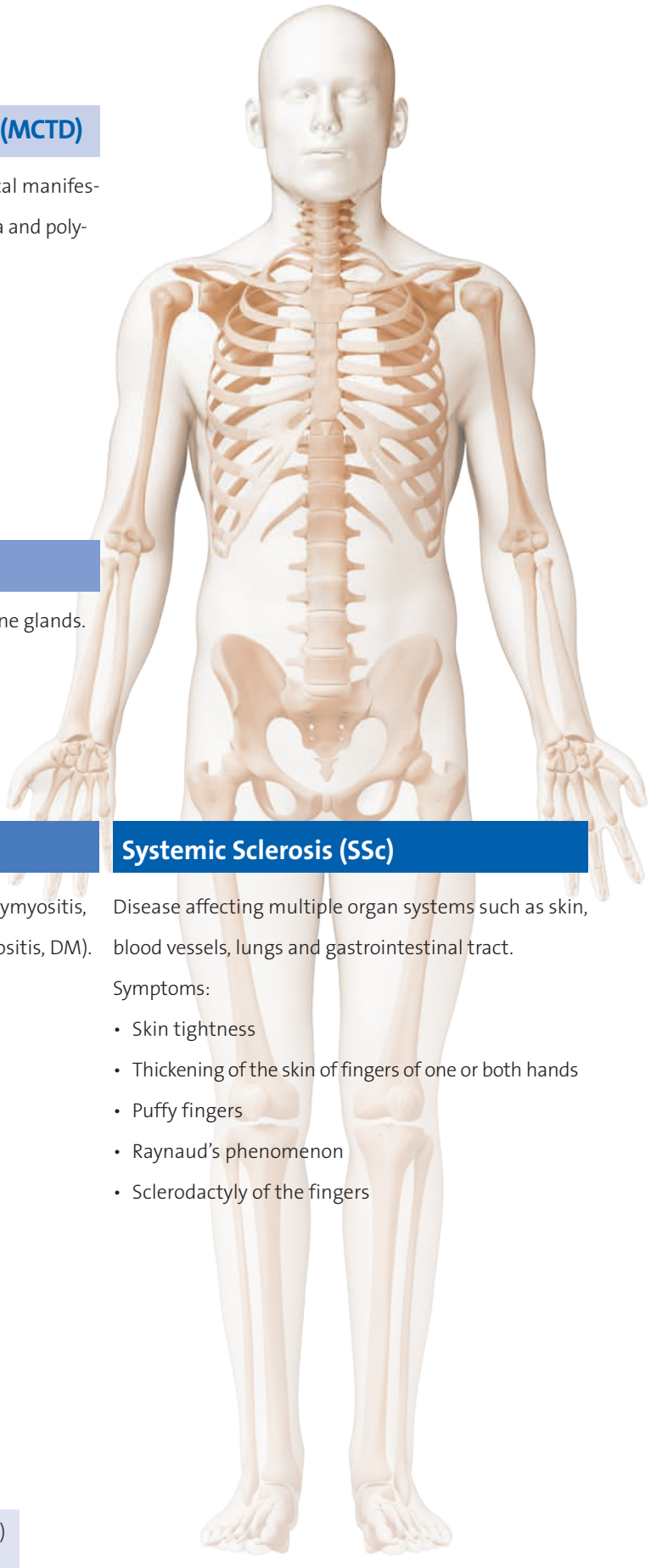
Clinical Characteristics

Mixed Connective Tissue Disease (MCTD)

Mixed connective tissue disease with clinical manifestations of a combination of SLE, scleroderma and polymyositis.

Symptoms:

- Swelling of hands and fingers
- Raynaud's phenomenon
- Specific symptoms of SLE, scleroderma and polymyositis



Sjögren's Syndrome (SjS)

Chronic inflammatory disease of the exocrine glands.

Symptoms:

- Dry eye syndrome
- Dry mouth

Myositis

Systemic inflammation of the muscles (polymyositis, PM) or both skin and muscles (dermatomyositis, DM).

Symptoms:

- Muscle weakness
- Muscle pain
- Skin lesions

Systemic Sclerosis (SSc)

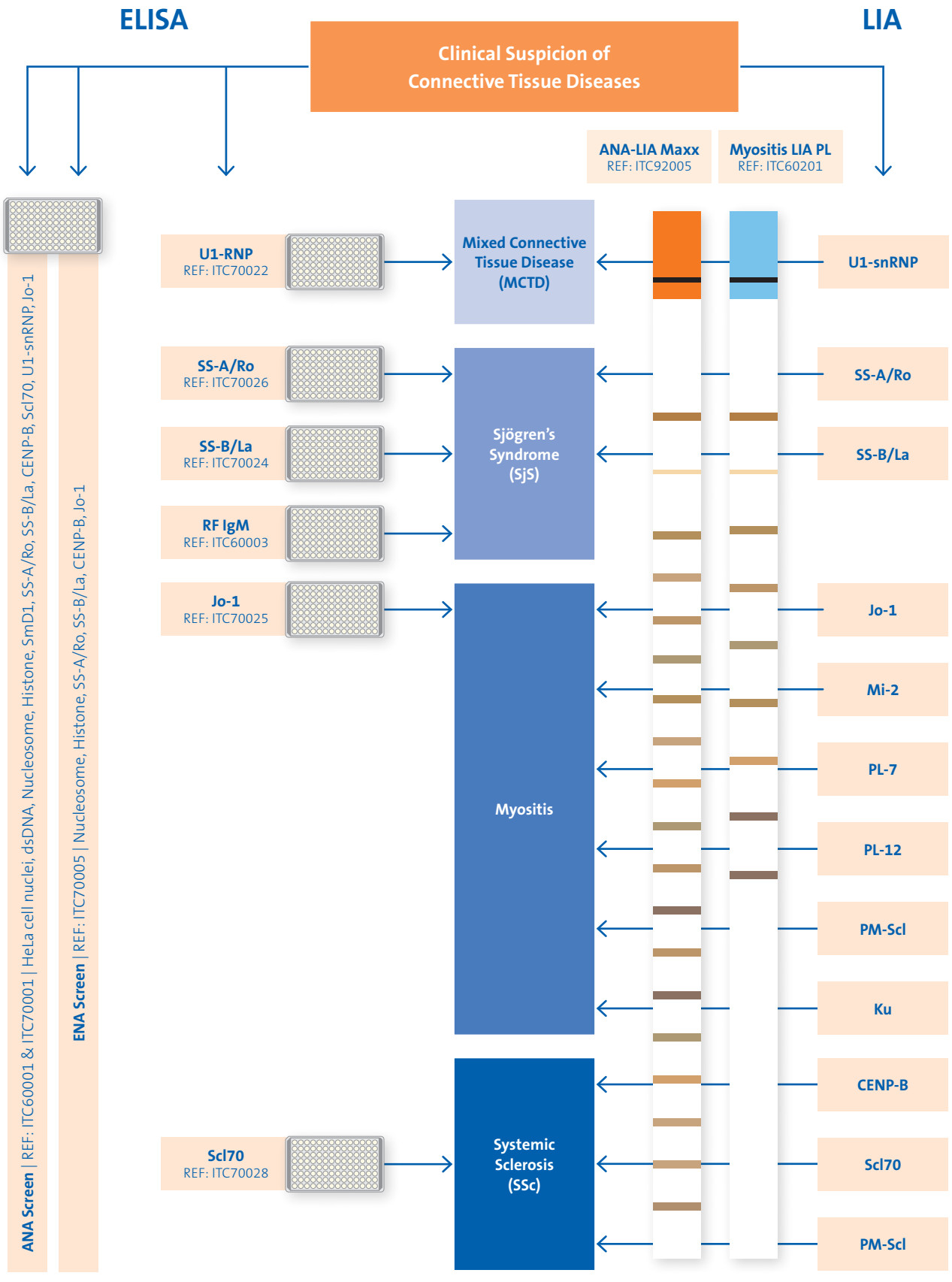
Disease affecting multiple organ systems such as skin, blood vessels, lungs and gastrointestinal tract.

Symptoms:

- Skin tightness
- Thickening of the skin of fingers of one or both hands
- Puffy fingers
- Raynaud's phenomenon
- Sclerodactyly of the fingers

Systemic Lupus Erythematosus (SLE)
see page 18

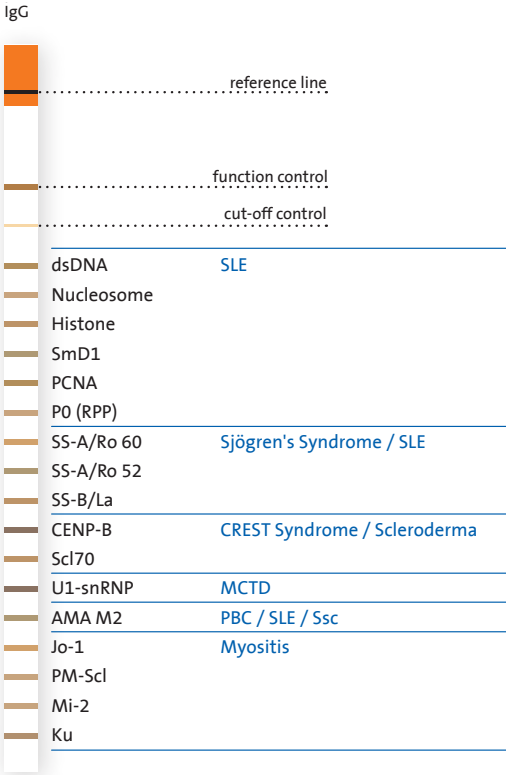
Diagnostic Options at a Glance

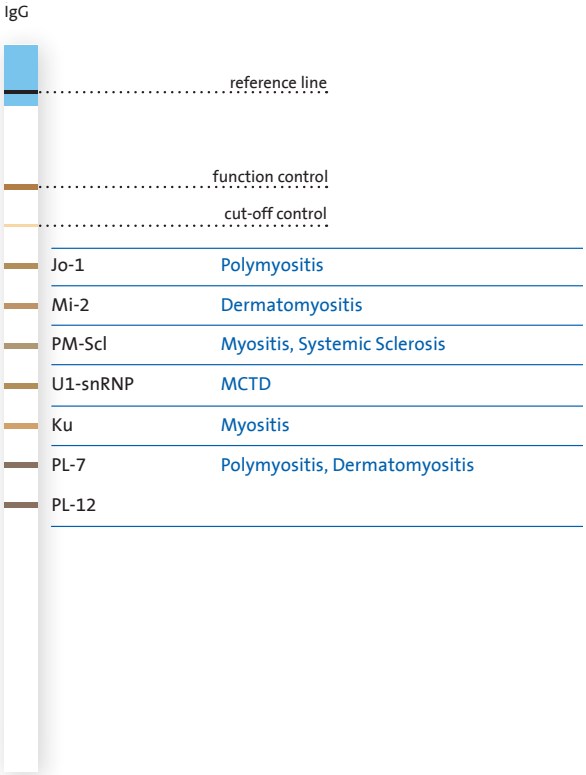


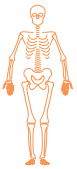
Connective Tissue Diseases

LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration	Color Coding
ANA-LIA Maxx Determination of anti-nuclear antibodies						
ITC92005	IgG	24 tests	dsDNA, Nucleosome, Histone, SmD1, PCNA, P0, SS-A/Ro 60, SS-A/Ro 52, SS-B/La, CENP-B, Scl70, U1-snRNP, AMA M2, Jo-1, PMScl100, Mi-2 and Ku 70/80	17	Qualitative internal function and cut-off control	Orange
Myositis-LIA PL Determination of myositis antibodies						
ITC60201	IgG	24 tests	Jo-1, Mi-2, PM-Scl100, U1-snRNP, Ku 70/80, PL-7, PL-12	7	Qualitative internal function and cut-off control	Blue







ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
ANA Screen Determination of antibodies to anti-nuclear antigens					
ITC60001	IgG/IgA/IgM	96 tests	HeLa cell nuclei, dsDNA, Nucleosome, Histone, SmD1, SS-A/Ro, SS-B/La, CENP-B, Scl70, U1-snRNP, Jo-1	Quantitative 31.25/62.5/125/250/500 U/ml	40 U/ml
ANA Screen (cut-off) Determination of antibodies to anti-nuclear antigens					
ITC70001	IgG/IgA/IgM	96 tests	HeLa cell nuclei, dsDNA, Nucleosome, Histone, SmD1, SS-A/Ro, SS-B/La, CENP-B, Scl70, U1-snRNP, Jo-1	Qualitative	cut-off calibrator
ENA Screen (cut-off) Determination of antibodies to extractable nuclear antigens					
ITC70005	IgG	96 tests	Nucleosome, Histone, SS-A/Ro, SS-B/La, CENP-B, Jo-1	Qualitative	cut-off calibrator
Jo-1-Antibodies Determination of antibodies to Jo-1					
ITC70025	IgG	96 tests	Jo-1	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml
SS-A/Ro-Antibodies Determination of antibodies to SS-A/Ro					
ITC70026	IgG	96 tests	SS-A/Ro 60, SS-A/Ro 52	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml
SS-B/La-Antibodies Determination of antibodies to SS-B/La					
ITC70024	IgG	96 tests	SS-B/La	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml
Scl70-Antibodies Determination of antibodies to Scl70					
ITC70028	IgG	96 tests	Scl70	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml
U1-snRNP-Antibodies Determination of antibodies to U1-snRNP					
ITC70022	IgG	96 tests	U1-snRNP	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml

Systemic Lupus Erythematosus

Clinical Characteristics

Systemic Lupus Erythematosus (SLE)

Chronic autoimmune disease affecting multiple organ systems.

Symptoms:

- Malar rash
- Discoid rash
- Photosensitivity
- Oral ulcers
- Nonerosive arthritis
- Serositis
- Nephritis
- Neurological disorders
- Hematologic disorders

SLE Subsets

Subacute Cutaneous Lupus Erythematosus (SCLE)

- Chronic remitting dermatitis characterized by severe photosensitivity.

Secondary SLE Syndrome (sSLE)

- *Secondary Sjögren's syndrome syndrome in SLE*
  SLE in combination with Sjögren's syndrome.
- *Antiphospholipid syndrome in SLE (secondary APS)*
  SLE in combination with antiphospholipid syndrome.

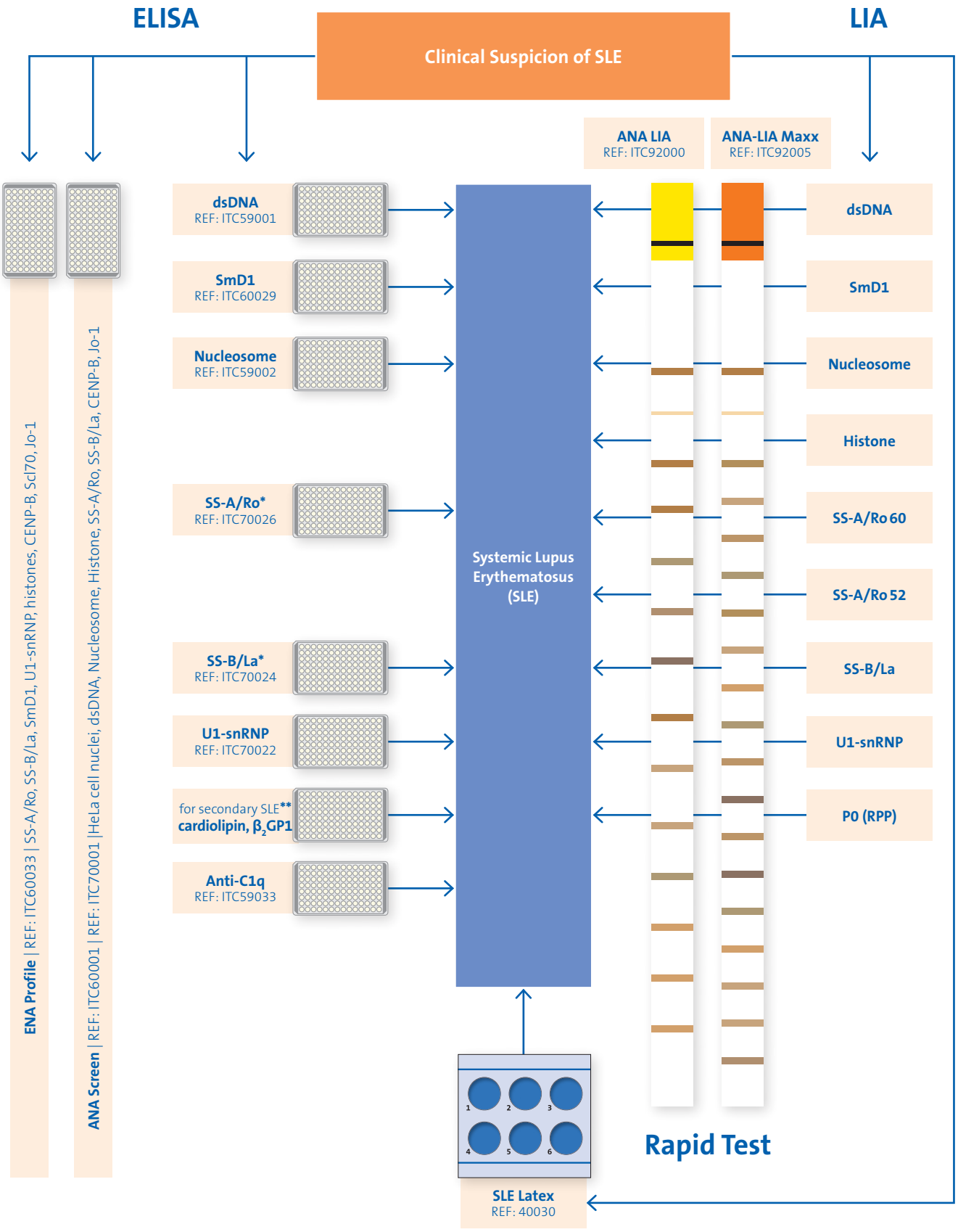
Drug Induced Lupus (DIL)

- DIL can arise months to years after exposure to drugs prescribed to treat various medical conditions. The most common drugs that cause DIL are hydralazine, procainamide, quinidine, isoniazid, diltiazem, and minocycline.

Neonatal Lupus Syndrome

- *Neonatal Lupus Erythematosus (NLE)*
  Erythema of skin regions exposed to light within a few days of birth caused by maternally transmitted autoantibodies.
- *Congenital Heart Block (CHB)*
  Bradycardia and severe cardiac arrhythmias between the 16th and 24th week of gestation due to autoantibody mediated inflammation of the heart conduction system.

Diagnostic Options at a Glance



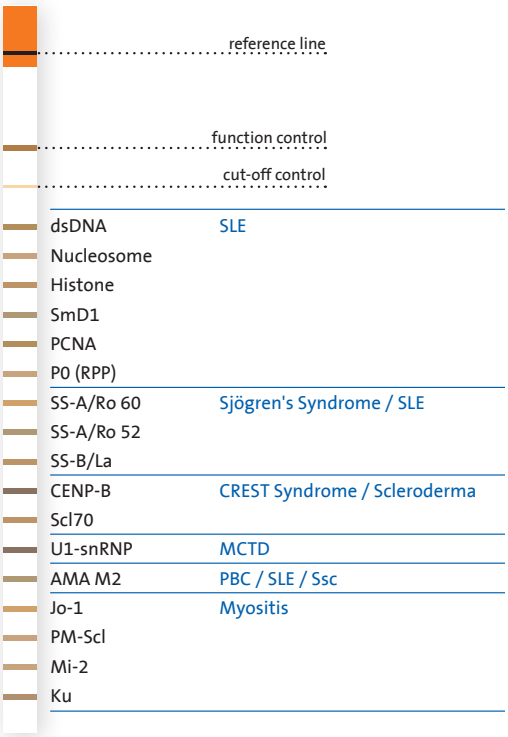
* See page 17

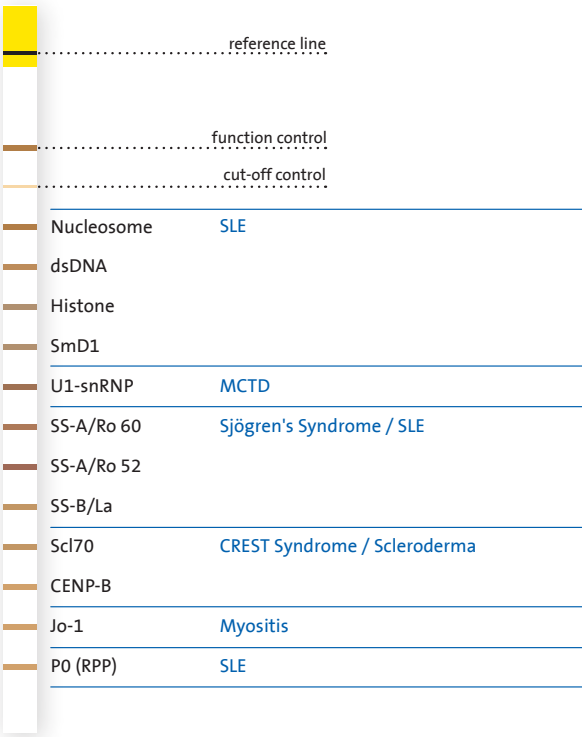
** See page 32

Systemic Lupus Erythematosus

LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration	Color Coding
ANA-LIA Maxx Determination of anti-nuclear antibodies						
ITC92005	IgG	24 tests	dsDNA, Nucleosome, Histone, SmD1, PCNA, P0, SS-A/Ro 60, SS-A/Ro 52, SS-B/La, CENP-B, Scl70, U1-snRNP, AMA M2, Jo-1, PMScl100, Mi-2 and Ku 70/80	17	Qualitative internal function and cut-off control	Orange
ANA-LIA Determination of anti-nuclear antibodies						
ITC92000	IgG	24 tests	Nucleosome, dsDNA, Histone, SmD1, U1-snRNP, SS-A/Ro 60, SS-A/Ro 52, SS-B/La, Scl70, CENP-B, Jo-1, RPP/P0 and P0	12	Qualitative internal function and cut-off control	Yellow





ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
ENA-Profile Simultaneous determination of antibodies to extractable nuclear antigens					
ITC60033	IgG	96 tests	SS-A/Ro, SS-B/La, SmD1, U1-snRNP, Histone, CENP-B, Scl70, Jo-1	Qualitative cut-off control	cut-off calibrator
Anti-C1q-Antibodies Determination of autoantibodies to complement C1q					
ITC59033	IgG	96 tests	C1q	Quantitative 12.5/25/50/100/200 U/ml	20 U/ml
dsDNA-Antibodies Determination of antibodies to double-stranded DNA					
ITC59001	IgG	96 tests	Double-stranded DNA	Quantitative 12.5/25/50/100/200 IU/ml	25 IU/ml
Nucleosome-Antibodies Determination of antibodies to nucleosomes					
ITC59002	IgG	96 tests	Nucleosomes	Quantitative 12.5/25/50/100/200 U/ml	25 U/ml
SmD1-Antibodies IgG Determination of antibodies to SmD1					
ITC60029	IgG	96 tests	SmD1-peptide	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	25 U/ml

Rapid Screening Tests

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
SLE Latex Test Latex slide test					
40031	Complete kit	20 tests	DNP	Qualitative	
40030		50 tests			
Glycine-NaCL Buffer Glycine-NaCl Buffer for sample dilution of latex slide tests					
40037	Buffer	100 ml			

Rheumatoid and Juvenile Idiopathic Arthritis

Clinical Characteristics

Rheumatoid Arthritis (RA)

Systemic inflammatory disorder causing irreversible joint damage.

Symptoms:

- Morning stiffness
- Redness and swelling of joints
- Weakness
- Symmetric arthritis
- Arthritis of 3 or more joints
- Malaise (fatigue, weight loss, depression)

Juvenile Idiophatic Arthritis (JIA)

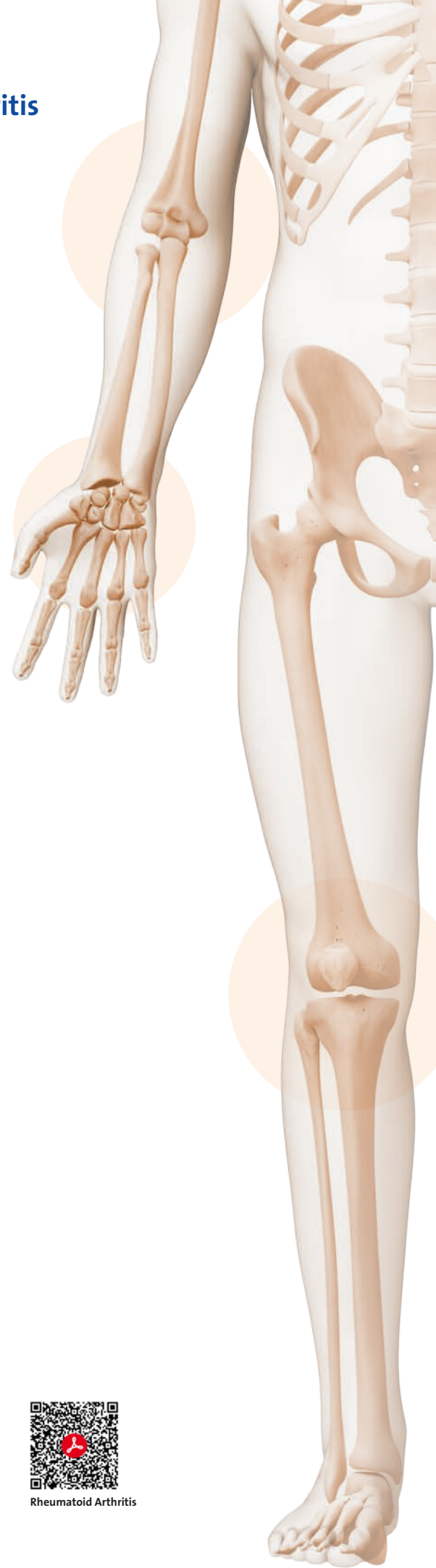
A group of joint inflammation diseases with an onset before the age of 16 in the absence of other articular diseases (see table “Differential Diagnosis”). JIA is classified into categories based on the number of joints involved and the presence of extra-articular symptoms.

Symptoms:

- Persistent or recurring arthritis of at least 6 weeks duration
- Fever
- Rash
- Psoriasis
- Enteritis

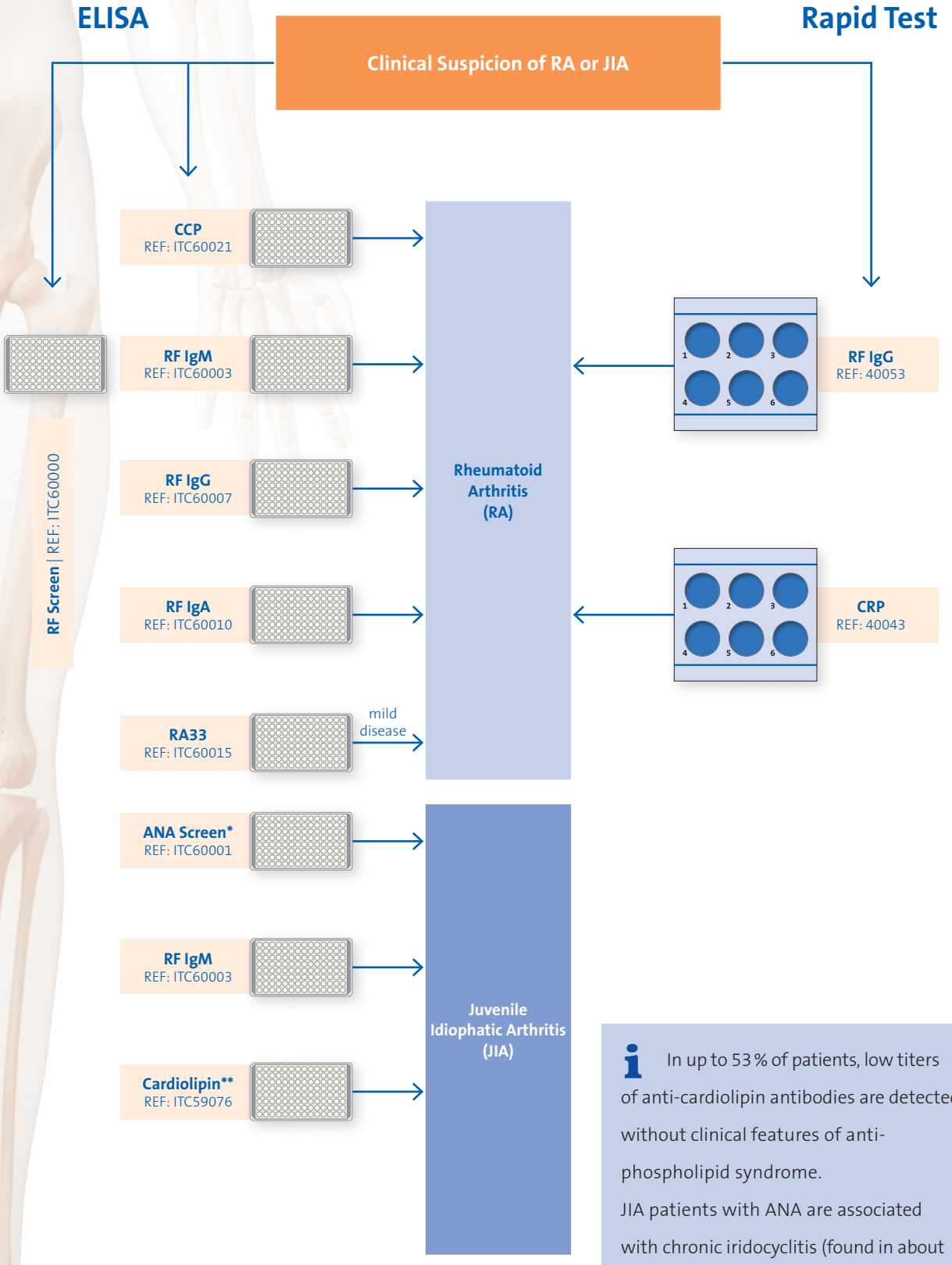
Differential Diagnosis of JIA

- Acute rheumatic fever
- Infections
- Reactive arthritis
- Connective tissue diseases
- Immunodeficiency diseases
- Hematologic diseases
- Neoplasis
- Injuries
- Foreign body
- Orthopedic diseases
- Frostbite
- Psychogenic arthralgias
- Uveitis



Rheumatoid Arthritis

Diagnostic Options at a Glance



In up to 53 % of patients, low titers of anti-cardiolipin antibodies are detected without clinical features of anti-phospholipid syndrome.
JIA patients with ANA are associated with chronic iridocyclitis (found in about 30 % of JIA patients). Histone antibodies are detectable in 51 % of JIA patients.

* See page 17
** See page 32

Rheumatoid and Juvenile Idiopathic Arthritis

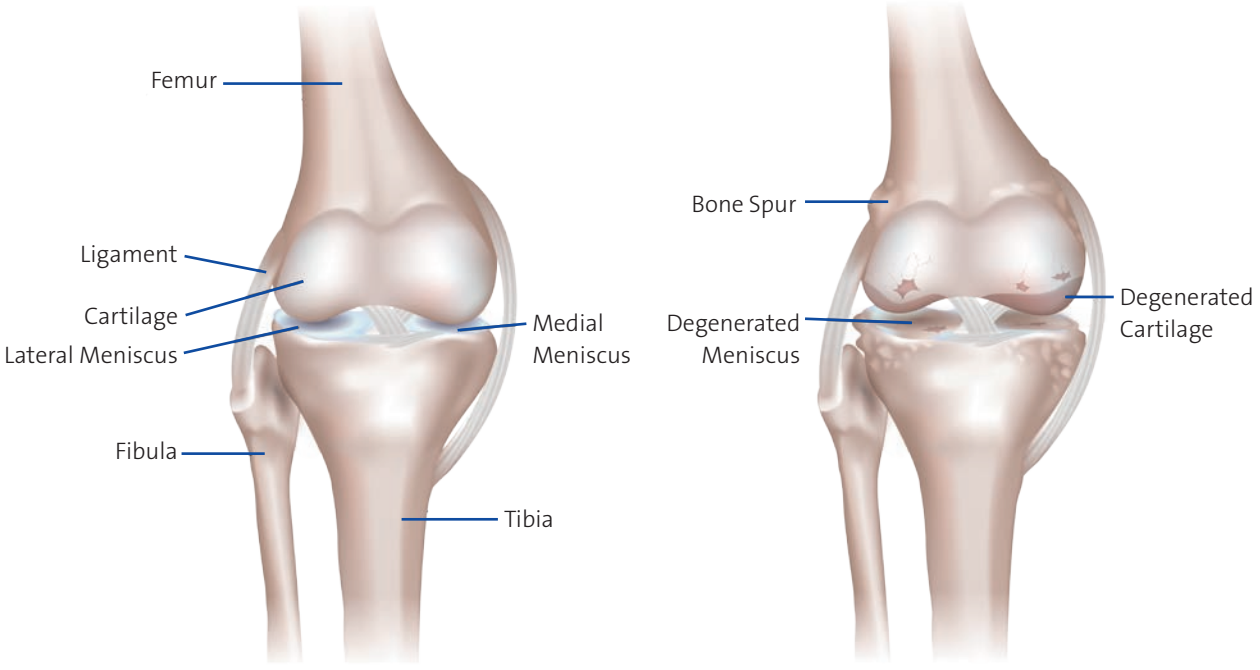
ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
CCP-Antibodies Determination of antibodies to cyclic citrullinated peptide					
ITC60021	IgG	96 tests	CCP2	Quantitative / Qualitative 25/50/200/800/1600 U/ml	25 U/ml
RA33-Antibodies Determination of antibodies to RA33					
ITC60015	IgG	96 tests	RA33	Quantitative 12.5/25/50/100/200 U/ml	25 U/ml
RF Screen Determination of antibodies to rheumatoid factor					
ITC60000	IgG/IgA/ IgM	96 tests	Rabbit IgG	Quantitative 12.5/25/50/100/200 IU/ml	40 U/ml
RF IgA Determination of antibodies to rheumatoid factor					
ITC60010	IgA	96 tests	Rabbit IgG	Quantitative 12.5/25/50/100/200 U/ml	25 U/ml
RF IgG Determination of antibodies to rheumatoid factor					
ITC60007	IgG	96 tests	Rabbit IgG	Quantitative / Qualitative 12.5/25/50/100/200 U/ml	30 U/ml
RF IgM Determination of antibodies to rheumatoid factor					
ITC60003	IgG	96 tests	Rabbit IgG	Quantitative / Qualitative 12.5/25/50/100/200 IU/ml	15 IU/ml

Rapid Screening Tests

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
HumaTex CRP Latex slide test					
40042	Complete kit	40 tests	CRP antibodies	Qualitative	6 mg/l Serum
40043		100 tests			
40040	Latex reagent	100 tests			
HumaTex RF Latex slide test					
40052	Complete kit	40 tests	IgG antibodies	Qualitative	12 IU/l Serum
40053		100 tests			
40050	Latex reagent	100 tests			
Glycine-NaCl Buffer Glycine-NaCl Buffer for sample dilution of latex slide tests					
40037	Buffer	100 ml			

Joint affected by rheumatoid arthritis



Normal joint **Rheumatoid arthritis**

Vasculitis

Clinical Characteristics

Eosinophile Granulomatosis with Polyangiitis (EGPA) [Churg-Strauss Syndrome]

Vasculitis of glomerular and pulmonary capillaries with multi-organ involvement: lungs, skin, kidneys, nerves.

Symptoms:

- Asthma
- Nasal polyps
- Allergic rhinitis

Microscopic Polyangiitis (MPA)

Necrotizing immune vasculitis of small vessels, capillaries, venules, arterioles with multi-organ involvement: lungs, skin, kidneys, nerves.

Symptoms:

- Skin lesions
- Inflammation of the kidney (glomerulonephritis)
- Blood and protein loss, shortness of breath, swelling of the legs
- Numbness
- Tingling
- Alveolar hemorrhage
- Night sweat
- Weight loss
- Fever
- Fatigue
- Malaise

Granulomatosis with Polyangiitis (GPA) [Wegener's Granulomatosis]

Necrotizing vasculitis of small to medium-size vessels: capillaries, venules, arterioles and arteries. Granulomatous inflammation involving multiple organs: e.g. lungs, eyes, skin, kidneys, joints, nerves.

Symptoms:

- Chronic hemorrhagic rhinitis
- Sinusitis
- Otitis media
- Symptoms in accordance with organ involvement
- Night sweats
- Weight loss
- Fatigue
- Fever

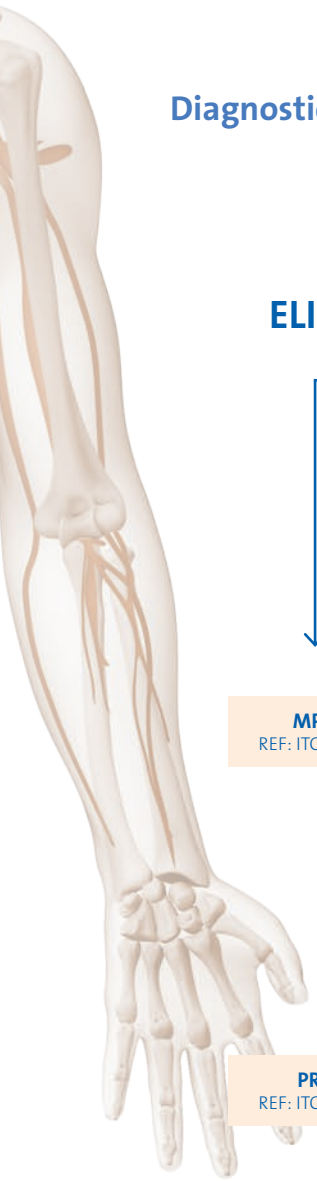
Goodpasture's Syndrome – anti-GBM Disease

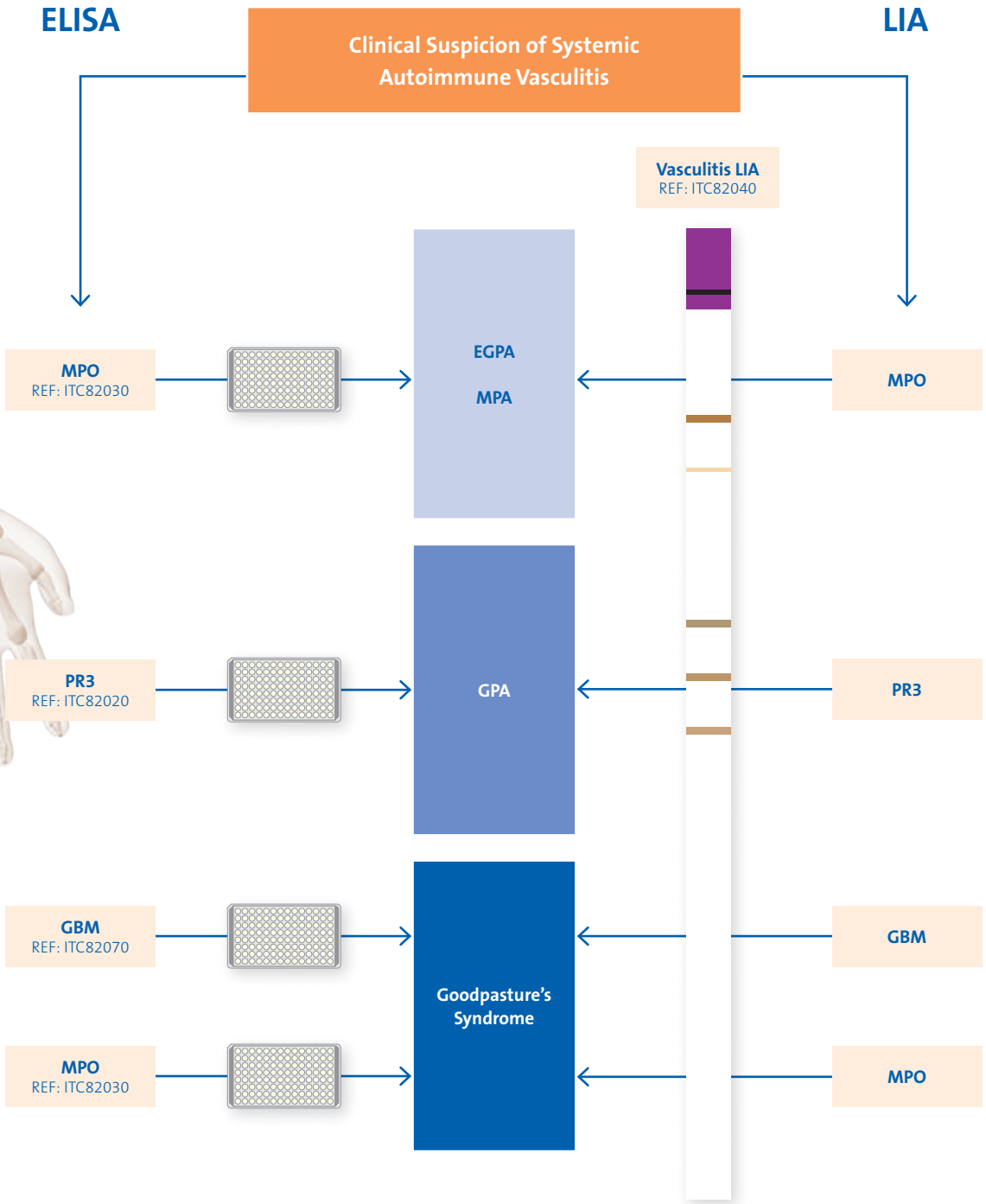
Chronic autoimmune glomerulonephritis caused by anti GBM (glomerular basement membrane) antibodies.

Symptoms:

- Rapidly progressive glomerulonephritis
- Pulmonary hemorrhage
- Alveolitis
- Kidney failure

Diagnostic Options at a Glance

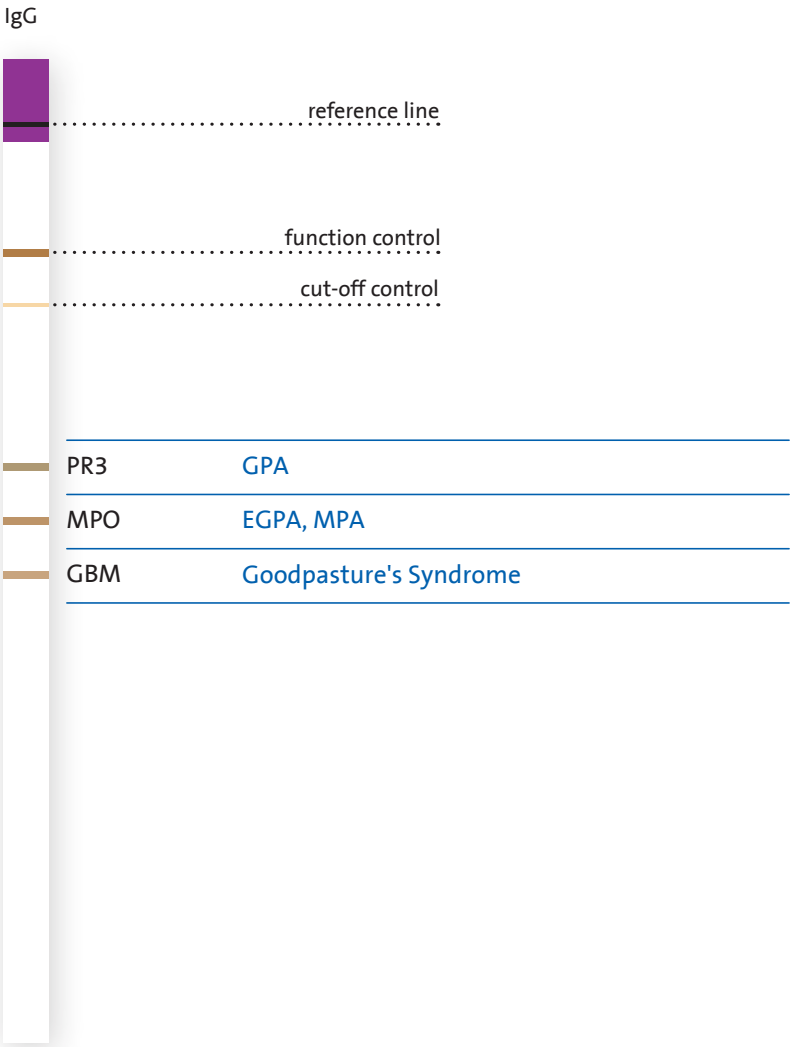




Vasculitis

LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration	Color Coding
Vasculitis-LIA Determination of vasculitis antibodies						
ITC82040	IgG	24 tests	PR3, MPO and GBM	3	Qualitative internal function and cut-off control	Purple

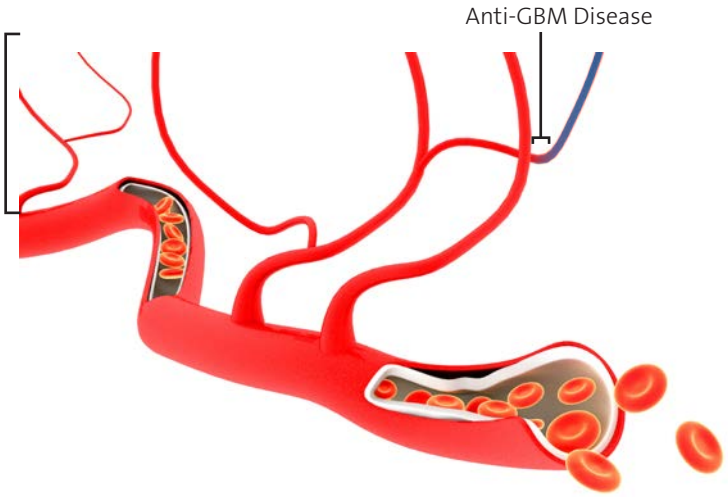


ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
GBM-Antibodies					
Determination of antibodies to glomerular basement membrane					
ITC82070	IgG	96 tests	GBM	Quantitative 2.5/7.4/22.2/66.7/200 U/ml	10 U/ml
MPO-ANCA					
Determination of antibodies to myeloperoxidase					
TC82030	IgG	96 tests	Myeloperoxidase	Quantitative 2.5/7.4/22.2/66.7/200 U/ml	10 U/ml
PR3-ANCA					
Determination of antibodies to proteinase 3					
ITC82020	IgG	96 tests	Proteinase 3	Quantitative 2.5/7.4/22.2/66.7/200 U/ml	10 U/ml

Blood vessels targeted in various types of vasculitis

ANA Associated Small Vessel Vasculitis
Microscopic Polyangiitis
Granulomatosis with Polyangiitis (Wegener's Granulomatosis)
Eosinophile Granulomatosis with Polyangiitis (Churg-Strauss Syndrome)



Antiphospholipid Syndrome

Clinical Characteristics

Antiphospholipid Syndrome (APS)

Venous and arterial thrombosis without inflammation of blood vessels.

Symptoms:

- One or more clinical episodes of arterial, venous or small vessel thrombosis
- One or more unexplained deaths of a morphologically normal fetus
- One or more premature births before week 34
- Three or more unexplained spontaneous abortions

Catastrophic Antiphospholipid Syndrome

Rare form of APS with extensive vascular occlusions in multiple organ systems.

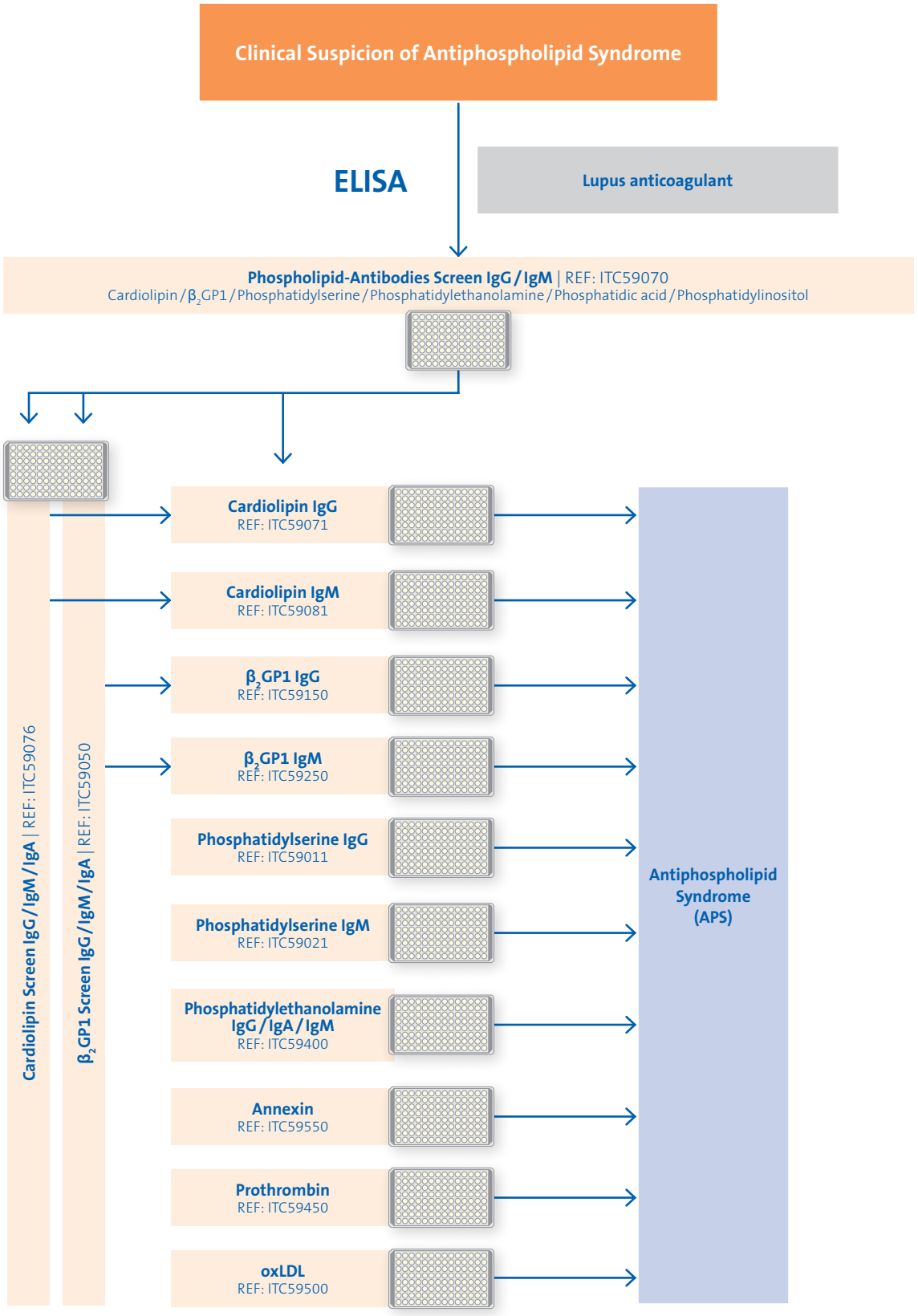
Symptoms:

- Renal failure
- Malignant arterial hypertension
- Severe CNS manifestations
- Acrocyanosis
- Gangrene

Antiphospholipid Syndrome

Diagnosis of APS

Diagnostic Options at a Glance

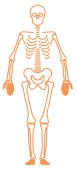


Repeat testing after 12 weeks

Antiphospholipid Syndrome

ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
Phospholipid-Antibodies Screen Determination of antibodies to phospholipids					
ITC59070	IgG/IgM	96 tests	Cardiolipin, 2GP1, Phosphatidylserine, Phosphatidylethanolamine, Phosphatidic acid, Phosphatidylinositol	Quantitative 6/12/25/50/100 U/ml	15 – 25 U/ml
Annexin V-Antibodies Screen Determination of antibodies to annexin V					
ITC59550	IgG/IgA/IgM	96 tests	Annexin V	Quantitative 6.25/12.5/25/50/100 U/ml	25 U/ml
beta$_2$-Glycoprotein 1-Antibodies Screen Determination of antibodies to beta$_2$-Glycoprotein 1					
ITC59050	IgG/IgA/IgM	96 tests	β_2GP1	Quantitative 3.12/6.25/12.5/25/50/100 U/ml	5 U/ml
beta$_2$-Glycoprotein 1-Antibodies IgG Determination of antibodies to beta$_2$-Glycoprotein 1					
ITC59150	IgG	96 tests	β_2GP1	Quantitative 4.7/9.4/18.8/37.5/75 ng/ml 6.25/12.5/25/50/100 U/ml	7 ng/ml
beta$_2$-Glycoprotein 1-Antibodies IgM Determination of antibodies to beta$_2$-Glycoprotein 1					
ITC59250	IgM	96 tests	β_2GP1	Quantitative 4.7/9.4/18.8/37.5/75 ng/ml 6.25/12.5/25/50/ 100 U/ml	7 ng/ml
Cardiolipin-Antibodies Screen Determination of antibodies to cardiolipin					
ITC59076	IgG/IgA/IgM	96 tests	Cardiolipin + cofactor β_2GP1	Quantitative 31.25/62.5/125/250/500 U/ml	45 U/ml
Cardiolipin-Antibodies Combi Determination of antibodies to cardiolipin					
ITC59082	IgG/IgM	96 tests	Cardiolipin + cofactor β_2GP1	Quantitative 31.25/62.5/125/250/500 U/ml	IgG: 48 U/ml IgM: 44 U/ml

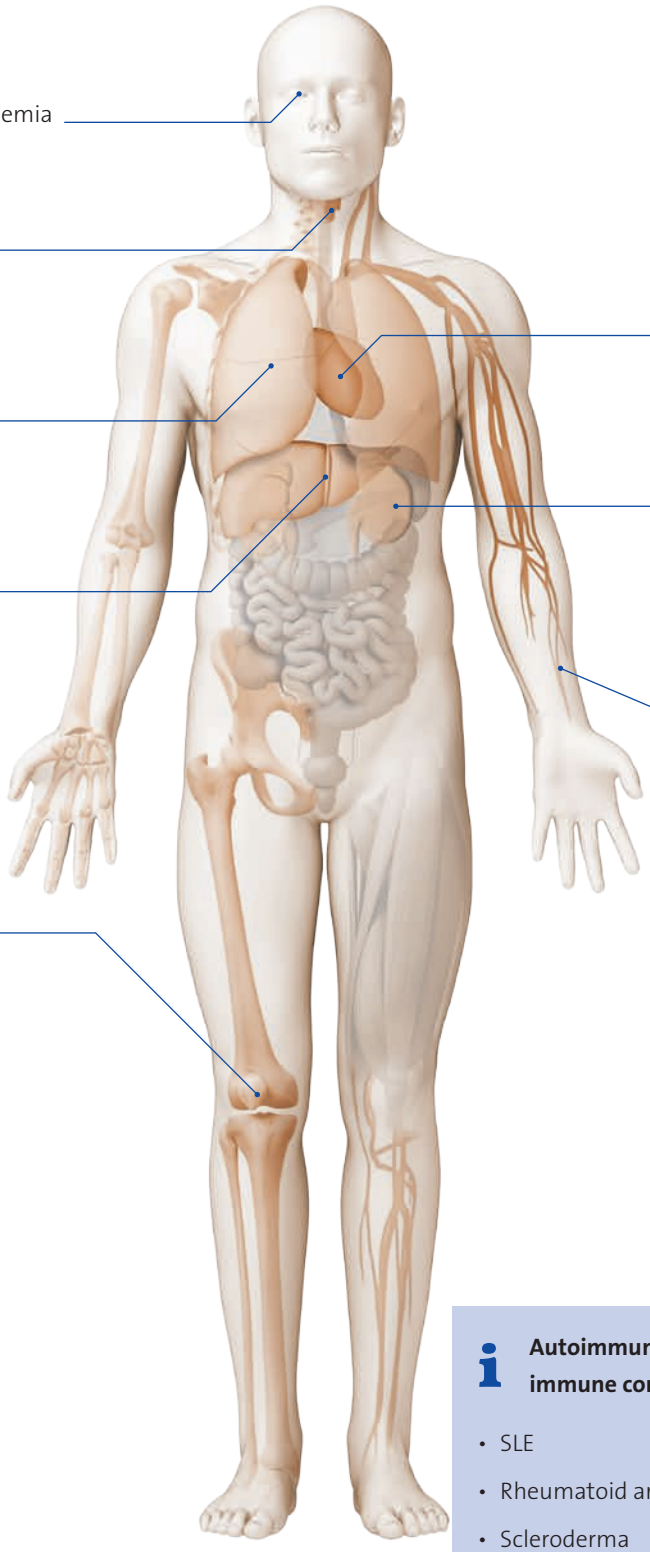


REF	Format	Unit/Size	Antigen	Calibration	Cut-off
Cardiolipin-Antibodies IgG Determination of antibodies to cardiolipin					
ITC59071	IgG	96 tests	Cardiolipin + cofactor β_2GP1	Quantitative 6.5/13/26/52/104 GPL/ml	48 U/ml
Cardiolipin-Antibodies IgM Determination of antibodies to cardiolipin					
TC59081	IgM	96 tests	Cardiolipin + cofactor β_2GP1	Quantitative 31.3/62.5/125/250/500 U/ml	44 U/ml
oxLDL-Antibodies Ig(GM) Determination of antibodies to oxidized low-density lipoproteins					
TC59500	IgG/IgM	96 tests	oxLDL	Quantitative 12.5/25/50/100/200 U/ml	30 U/ml
Phosphatidylethanolamine-Antibodies Screen Determination of antibodies to phosphatidylethanolamine					
ITC59400	IgG/IgA/IgM	96 tests	Phosphatidylethanolamine	Quantitative 6.25/12.5/25/50/100 U/ml	15 U/ml
Phosphatidylserine-Antibodies Screen Determination of antibodies to phosphatidylserine					
ITC59027	IgG/IgA/IgM	96 tests	Phosphatidylserine + cofactor β_2GP1	Quantitative 6.25/12.5/25/50/100 U/ml	15 U/ml
Phosphatidylserine-Antibodies IgG Determination of antibodies to phosphatidylserine					
ITC59011	IgG	96 tests	Phosphatidylserine + cofactor β_2GP1	Quantitative 6.25/12.5/25/50/100 U/ml	15 U/ml
Phosphatidylserine-Antibodies IgM Determination of antibodies to phosphatidylserine					
ITC59021	IgM	96 tests	Phosphatidylserine + cofactor β_2GP1	Quantitative 6.25/12.5/25/50/100 U/ml	15 U/ml
Prothrombin-Antibodies Screen Determination of antibodies to prothrombin					
ITC59450	IgG/IgA/IgM	96 tests	Prothrombin (factor II), phosphatidylserine	Quantitative 6.25/12.5/25/50/100 U/ml	30 U/ml

Circulating Immune Complexes

Clinical Characteristics

Deposition of antigen-antibody complexes that play a central role in the pathogenesis of several autoimmune disorders.



Autoimmune disorders associated with immune complex deposition

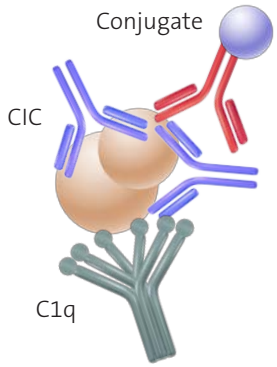
- SLE
- Rheumatoid arthritis
- Scleroderma
- Sjögren's syndrome
- Vasculitis
- Hepatitis
- Primary biliary cirroses

Circulating Immune Complexes

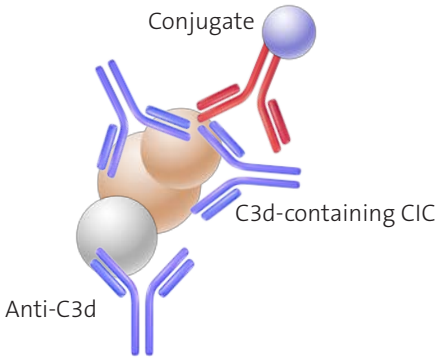
ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
CIC IgG Determination of antibodies to C1q circulating immune complexes					
ITC59031	IgG	96 tests	C1q-CIC	Quantitative 25/50/100/400 µg/ml	55 µg/ml
Complement Activity Determination of complement activity					
ITC59035	IgG	96 tests	IgM (complement activator)	Quantitative 25/50/100/200 U/ml	normal range: 40 – 200 U/ml
C3d-CIC Determination of antibodies to C3d circulating immune complexes					
ITC59032	IgG	96 tests	Anti-C3d-CIC	Quantitative 25/50/100/200 µg/ml	40 µg/ml

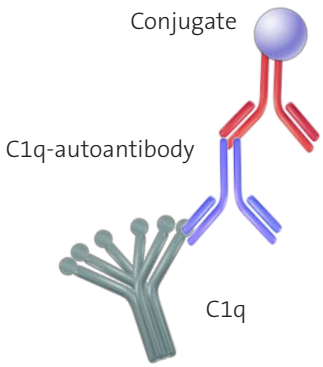
Different ELISA tests targeting complement factor



ITC59031: CIC-IgG ELISA



ITC59032: C3d-CIC-IgG ELISA



ITC59033: C1q-Antibodies ELISA

Reactive Arthritis

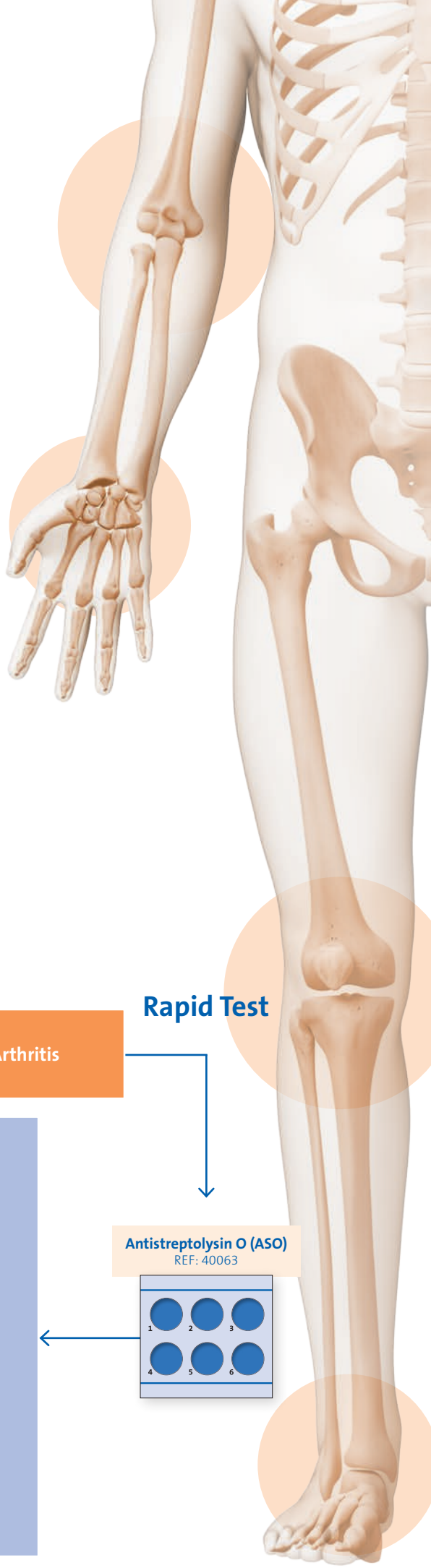
Clinical Characteristics

Reactive Arthritis

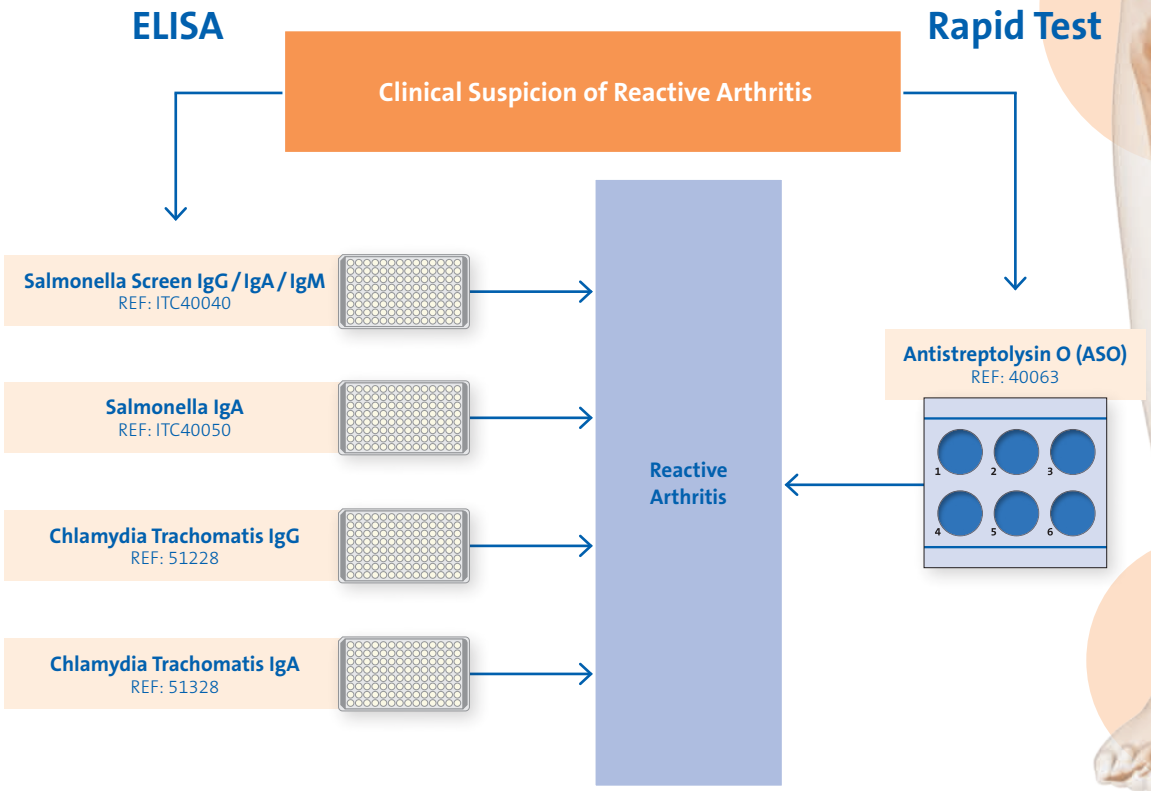
Autoinflammatory response triggered by bacterial infection.

Symptoms:

- Pain and swelling of certain joints, often the knees and / or ankles
- Swelling and pain at the heels
- Extensive swelling of the toes or fingers
- Persistent low back pain, that tends to be worse at night or in the morning
- Group of rheumatic joint diseases with an onset in childhood before the age of 16
- Malaise
- Fatigue
- Fever



Diagnostic Options at a Glance



ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
Chlamydia Trachomatis IgA Determination of antibodies to *Chlamydia trachomatis*					
51328	IgA	96 tests	C. trachomatis	Qualitative	cut-off calibrator
Chlamydia Trachomatis IgG Determination of antibodies to *Chlamydia trachomatis*					
51228	IgG	96 tests	C. trachomatis	Qualitative	cut-off calibrator
Salmonella-Antibodies Screen (cut-off) Determination of antibodies to Salmonella					
ITC40040	IgG/IgA/IgM	96 tests	LPS of S. typhimurium and S. enteritidis	Qualitative	cut-off calibrator
Salmonella-Antibodies IgA (cut-off) Determination of antibodies to Salmonella					
ITC40050	IgA	96 tests	LPS of S. typhimurium and S. enteritidis	Qualitative	cut-off calibrator

Rapid Screening Tests

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
HumaTex ASO Latex slide test					
40062	Complete kit	40 tests	Streptolysin O	Qualitative	200 IU/l Serum
40063		100 tests			
40060	Latex reagent	100 tests			
Glycine-NaCl Buffer Glycine-NaCl Buffer for sample dilution of latex slide tests					
40037	Buffer	100 ml			

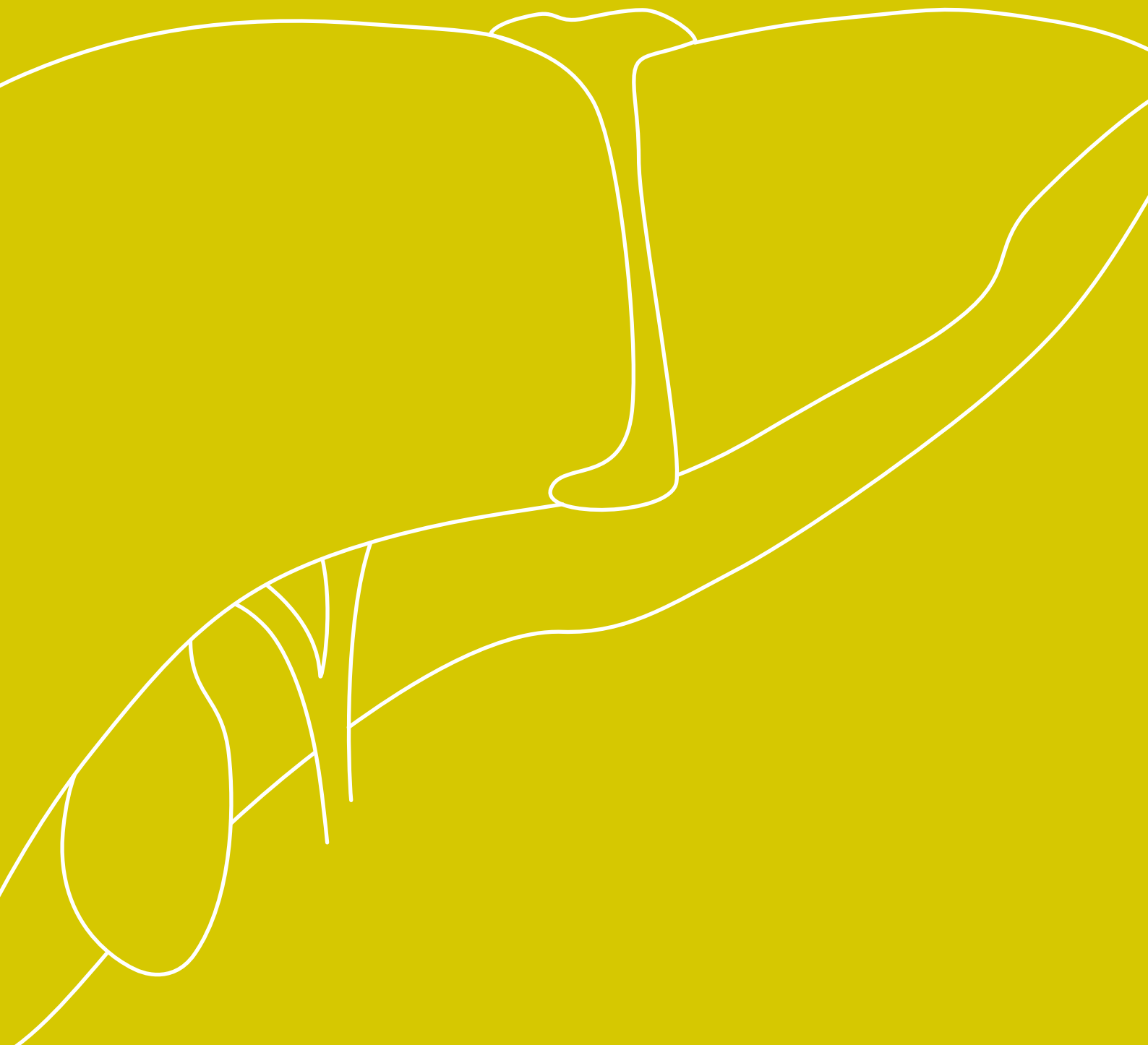
Bacteria that may cause reactive arthritis:

- Salmonella
- Chlamydia
- Campylobacter
- Shigella
- Yersinia
- Streptococcus

Anti-Salmonella

Hepatology

HUMAN's product line for autoimmune mediated liver diseases consists of both line immunoassays and ELISAs.
The IMTEC Liver-LIA provides the differential diagnosis by detection of autoantibodies specific for autoimmune hepatitis (AIH) as well as primary biliary cirrhosis (PBC) and primary sclerosing cholangitis (PSC).
The product range is completed by ELISAs for the quantitative determination of AMA-M2 and LKM-1 antibodies.



Hepatology

Clinical Characteristics

Primary Billiary Cirrhosis (PBC)

Chronic cholestatic liver disease leading to liver cirrhosis.

Symptoms:

- Upper abdominal pain, right-sided
- Pruritis
- Sicca symptoms
- Chronic fatigue
- Hepatomegaly
- Partial hypertension
- Local hyperpigmentation
- Osteoporosis

Primary Sclerosing Cholangitis (PSC)

Chronic cholestatic liver disease characterized by chronic inflammatory processes of the bile ducts.

Symptoms:

- Pruritis
- Chronic fatigue
- Upper abdominal pain, right-sided
- Hepatomegaly
- Partial hypertension
- Local hyperpigmentation
- Osteoporosis

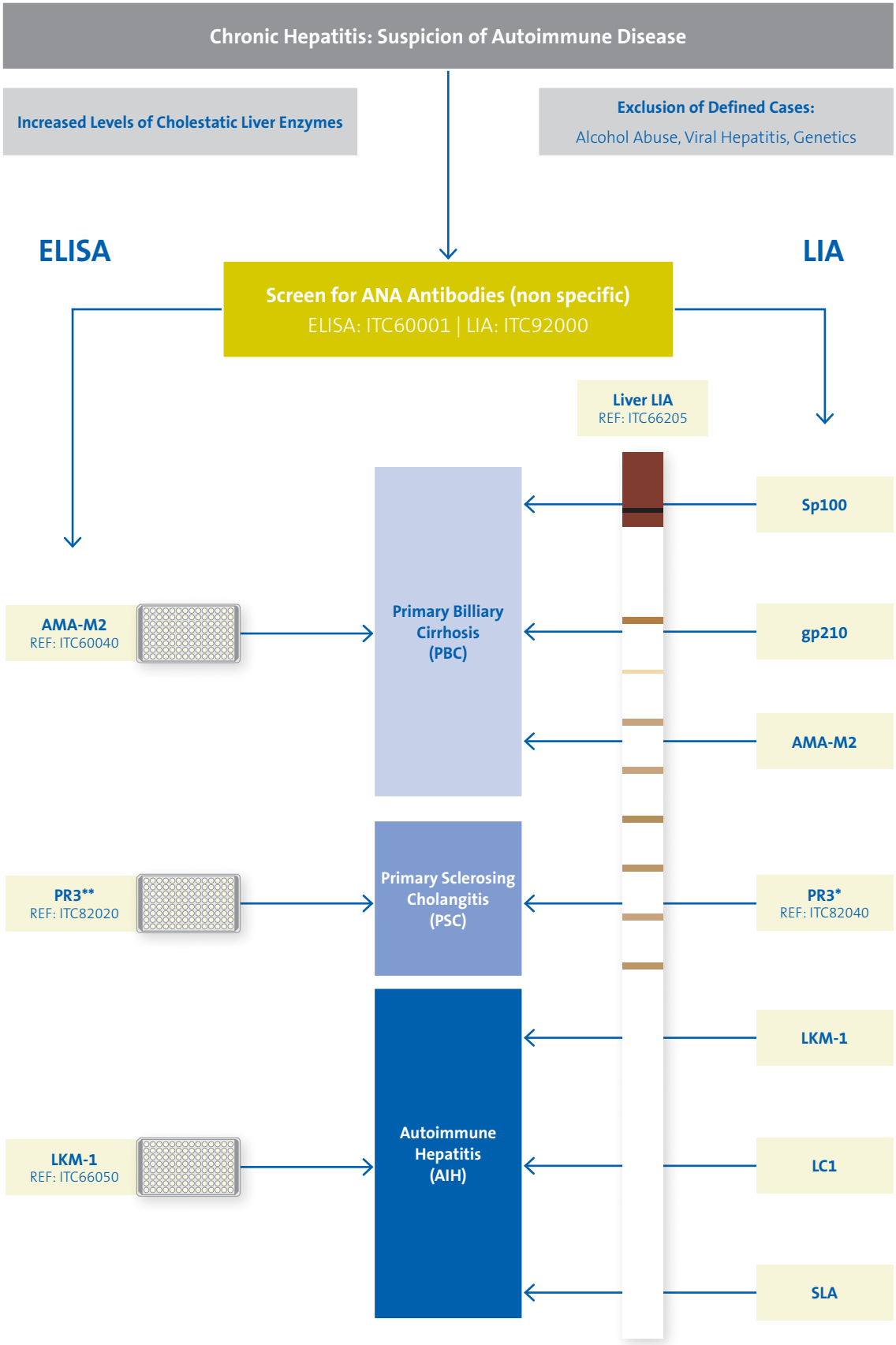
Autoimmune Hepatitis (AIH)

Chronic autoimmune hepatitis responsible for 10–20% of all chronic hepatitis cases with hepatocyte destruction and fibrosis.

Symptoms:

- Abdominal pain, right-sided
- Chronic fatigue
- Jaundice
- Anorexia
- Fever

Diagnostic Options at a Glance



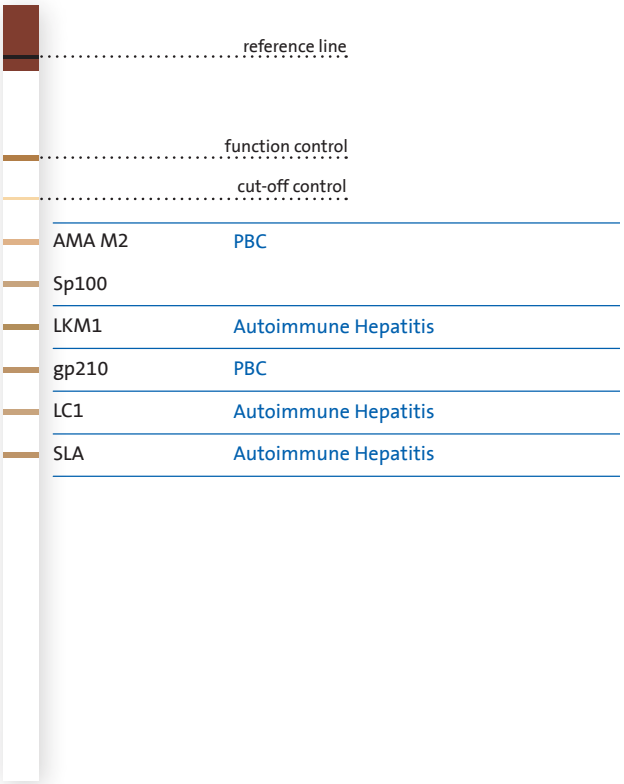
* See page 28

** See page 29

Hepatology

LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration	Color Coding
Liver-LIA Determination of antibodies to autoimmune liver diseases						
ITC66205	IgG	24 tests	AMA M2, Sp100, LKM-1, gp210, LC1, SLA	6	Qualitative internal function and cut-off control	Brown



ELISA

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
AMA M2 Determination of antibodies to anti-mitochondrial antigen M2					
ITC60040	IgG	96 tests	AMA M2	Quantitative 2/8/31/125/500 U/ml	10 U/ml
LKM-1-Antibodies Determination of antibodies to liver-kidney microsomal antigen 1					
ITC66050	IgG	96 tests	LKM-1 peptide	Quantitative 12.5/25/50/100/200 U/ml	25 U/ml

Gastroenterology

The IMTEC product line for the detection of autoimmune bowel diseases includes ELISAs for specific autoantibody markers for celiac disease, d-gliadin (DGP) and tissue transglutaminase (tTG).
The Gastro-LIA is used for the detection of IgA and IgG autoantibodies of autoimmune gastrointestinal diseases and carries 5 different antigens that help to identify autoantibodies in patients suffering from gastro-intestinal autoimmune diseases (celiac disease, Crohn's disease and autoimmune gastritis).
Anti-saccharomyces cerevisiae mannan antibodies (ASCA) are seen in Crohn's disease. Pernicious anemia can be detected by anti-parietal cell autoantibodies (PCA) and intrinsic factor (IF) autoantibodies.

Gastroenterology

Clinical Characteristics

Celiac Disease

Gluten triggered autoimmune mediated enteropathy.

Symptoms:

- Chronic diarrhea
- Abdominal pain
- Malabsorption syndrome: nutrients + vitamins
- Osteoporosis
- Dermatitis
- Neurological problems
- Weight loss
- Chronic fatigue
- Depression
- Reduced bone mineral density

Symptoms in children and adolescents:

- Malnourishment:
- Growth problems
- Weight loss
- Delayed puberty
- Depression

Crohn's Disease

Chronic inflammatory bowel disease.

Inflammation affects the whole gastro-intestinal tract from mouth to anus leading to stenosis, fistulas and abscesses.

Symptoms:

- Mucoid diarrhea
- Recurrent abdominal pain, right lower abdomen
- Weight loss
- Mild fever

Pernicious Anemia – Vitamin B12 Deficiency Anemia

Disturbed reabsorption from the ileum in chronic inflammation (Crohn's disease).

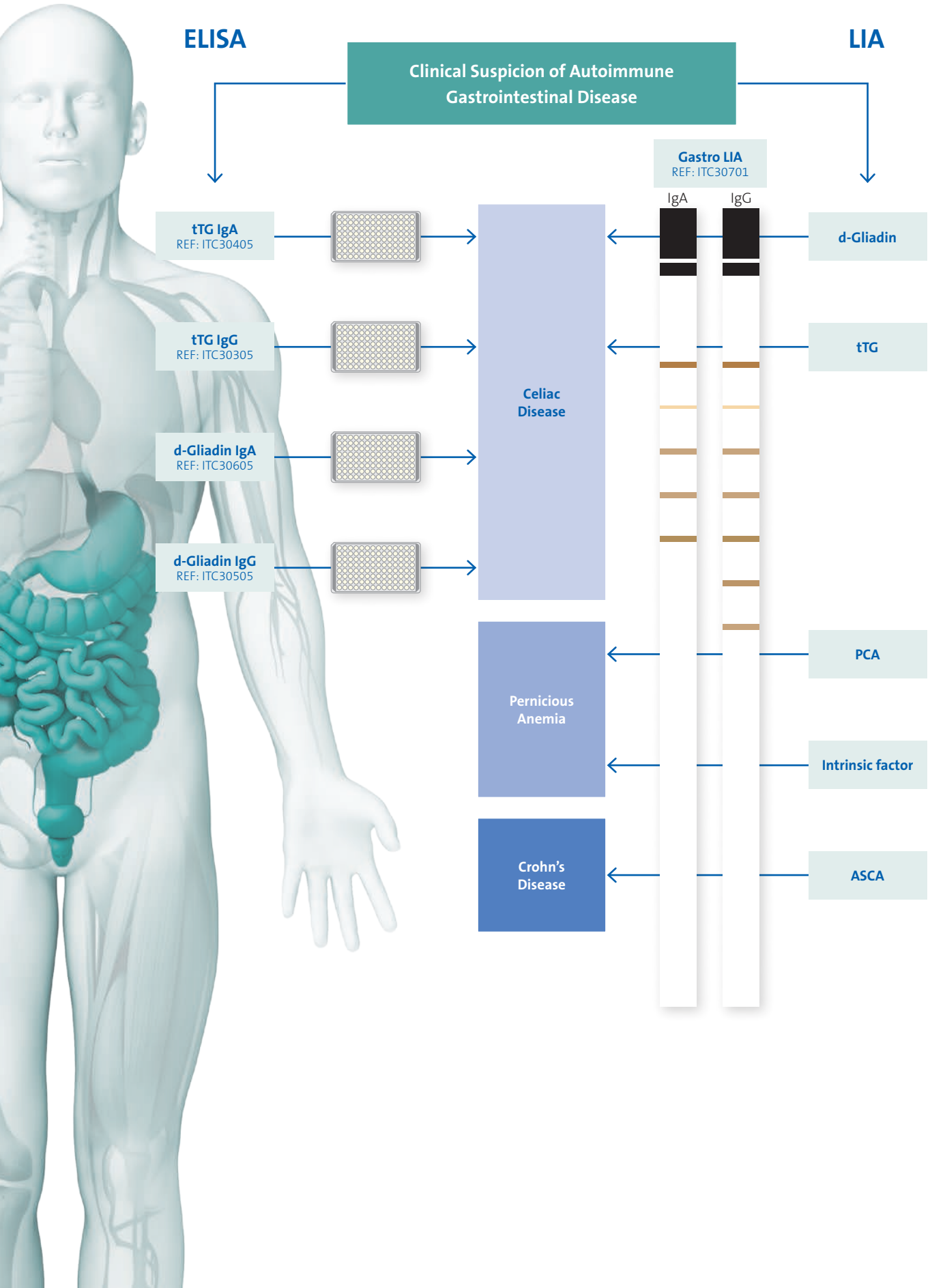
Prevention of absorption by intrinsic factor antibodies.

Failure of blood cells to mature due to vitamin B12 deficiency.

Symptoms:

- Diarrhea
- Fatigue
- Pallor (anemia)
- Polyneuropathy

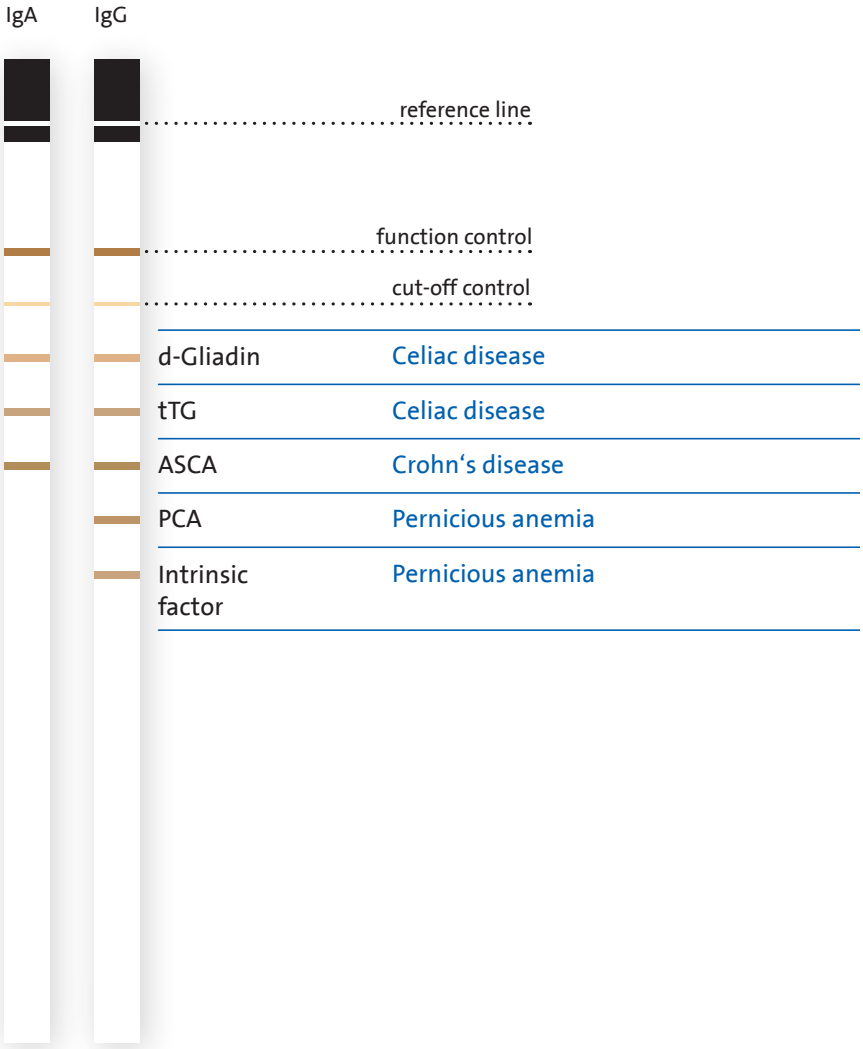
Diagnostic Options at a Glance



Gastroenterology

LIA

REF	Format	Unit/Size	Antigen	No. of Antigens	Calibration	Color Coding
Gastro-LIA Determination of antibodies to gastrointestinal diseases						
ITC30701	IgG/IgA	24 tests	d-Gliadin, Tissue transglutaminase, ASCA, PCA, Intrinsic factor	5	Qualitative internal function and cut-off control	Black



ELISA

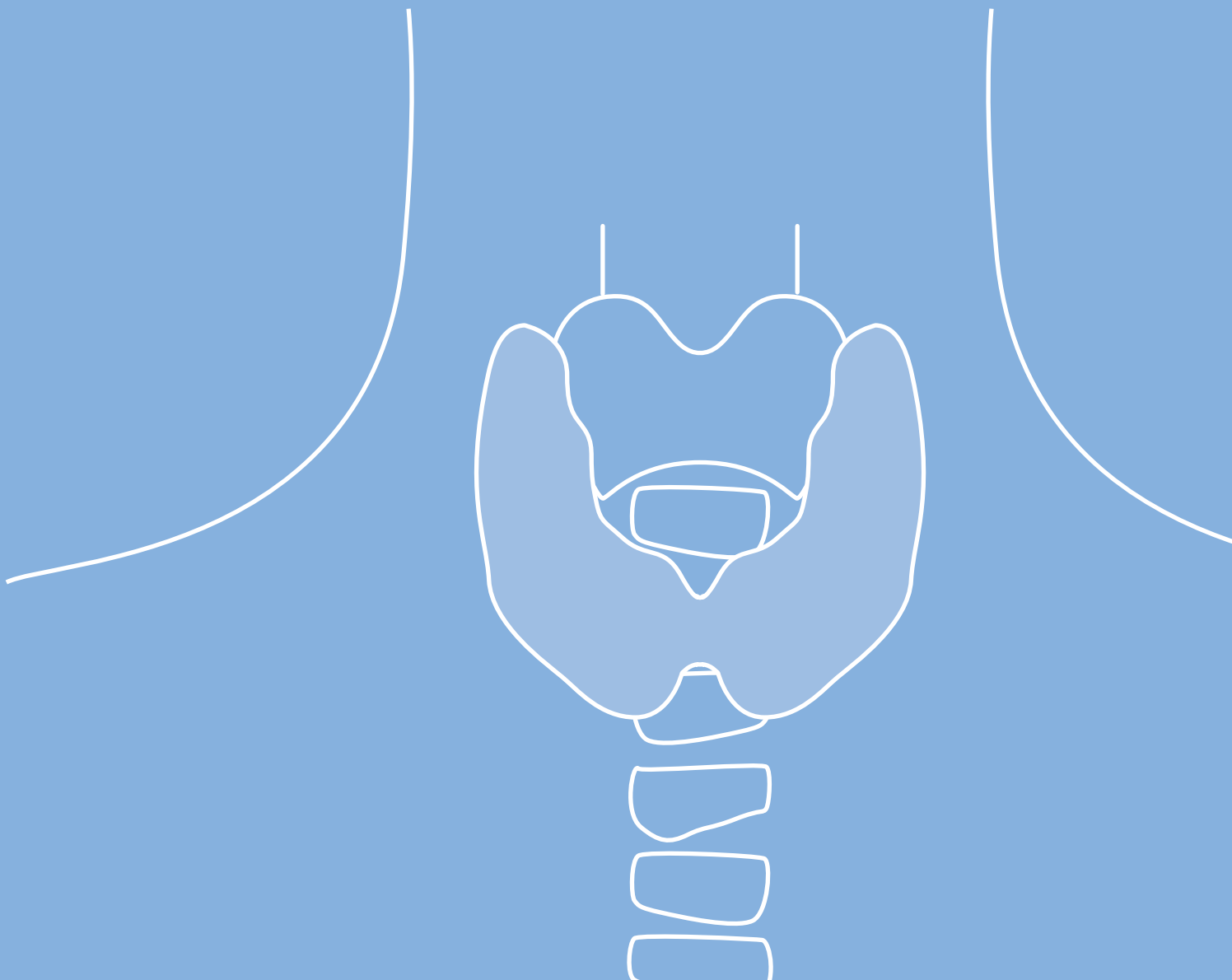
REF	Format	Unit/Size	Antigen	Calibration	Cut-off
d-Gliadin-Antibodies IgA Determination of antibodies to deamidated Gliadin					
ITC30605	IgG	96 tests	d-Gliadin	Quantitative 6.25/12.5/25/50/ 100 U/ml	10 U/ml
d-Gliadin-Antibodies IgG Determination of antibodies to deamidated Gliadin					
ITC30505	IgG	96 tests	d-Gliadin	Quantitative 6.25/12.5/25/50/ 100 U/ml	10 U/ml
t-Transglutaminase-Antibodies IgA (distributed by HUMAN) Determination of antibodies to tissue transglutaminase					
ITC30405	IgA	96 tests	Tissue transglutaminase	Quantitative 0/10/20/50/100 U/ml	9 – 16 U/ml
t-Transglutaminase-Antibodies IgG (distributed by HUMAN) Determination of antibodies to tissue transglutaminase					
ITC30305	IgG	96 tests	Tissue transglutaminase	Quantitative 2/10/20/50/100 U/ml	9 – 16 U/ml

Celiac disease frequently appears together with other autoimmune diseases:

- Diabetes mellitus type 1
- Autoimmune thyroiditis
- Autoimmune polyglandular syndrome

Endocrinology

Autoimmune thyroid diseases (AITD) comprise two main clinical presentations: Graves' disease (GD) and Hashimoto's thyroiditis (HT). Both are characterized by lymphocytic infiltration of the thyroid parenchyma. Beside the measurement of autoantibodies to TrAb, TG and TPO targeting thyroid gland epitopes, the diagnosis of AITDs is based on clinical signs, symptoms and blood tests that measure levels of thyroid hormones (fT3 and fT4) and thyroid-stimulating hormone (TSH) released by pituitary gland.



Endocrinology

Clinical Characteristics

Autoimmune Hyperthyroidism
Graves' Disease

Autoimmune-mediated thyroid hyperfunction.

Symptoms:

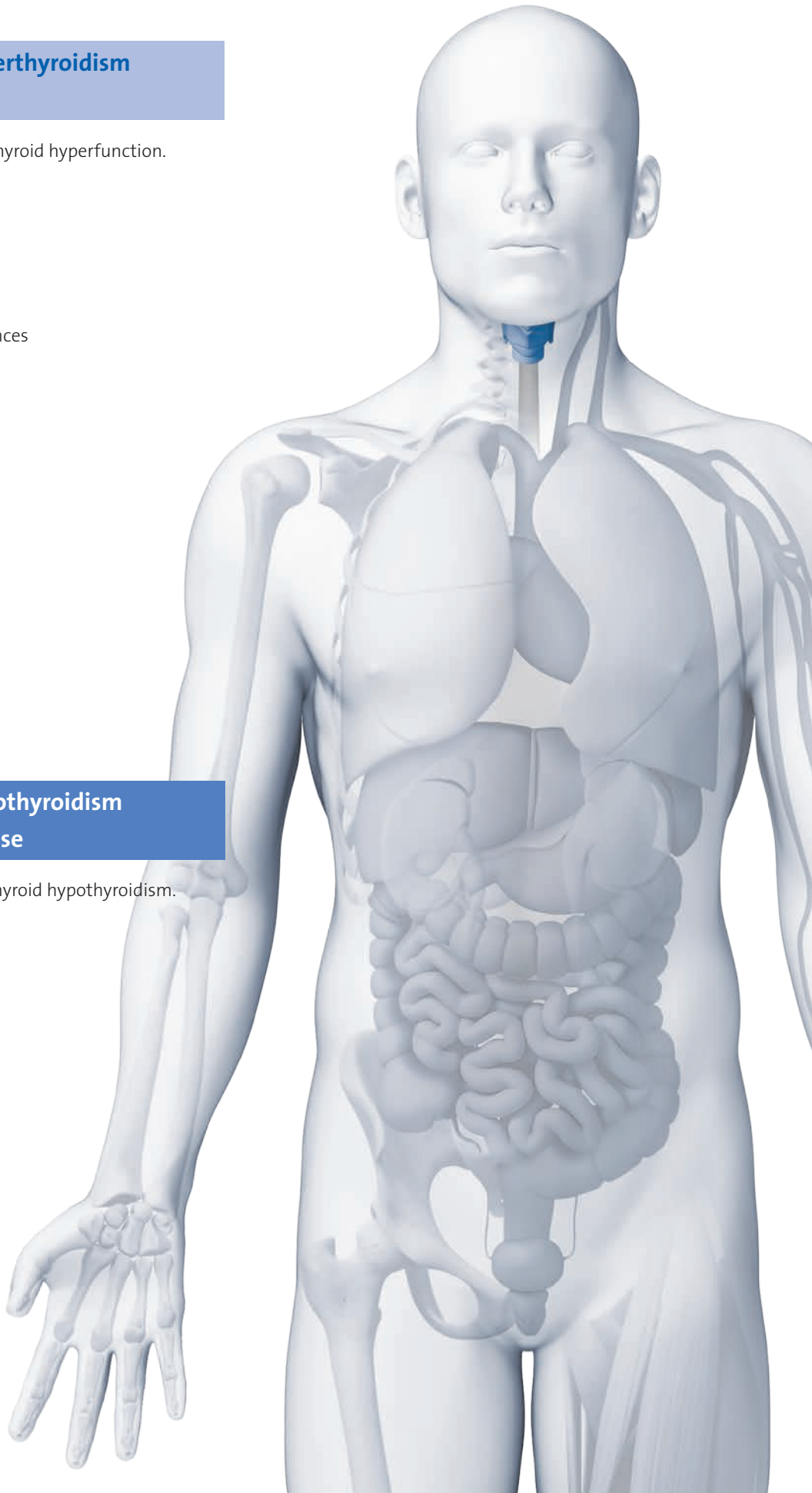
- Exophthalmos
- Struma
- Tachycardia
- Heart rhythm disturbances
- Nervousness
- Insomnia
- Rapid fatigue
- Sweating
- Heat sensitivity
- Hand tremor
- Exhaustion
- Diarrhea
- Weight loss
- Muscle and joint pain

Autoimmune Hypothyroidism
Hashimoto's Disease

Autoimmune mediated thyroid hypothyroidism.

Symptoms:

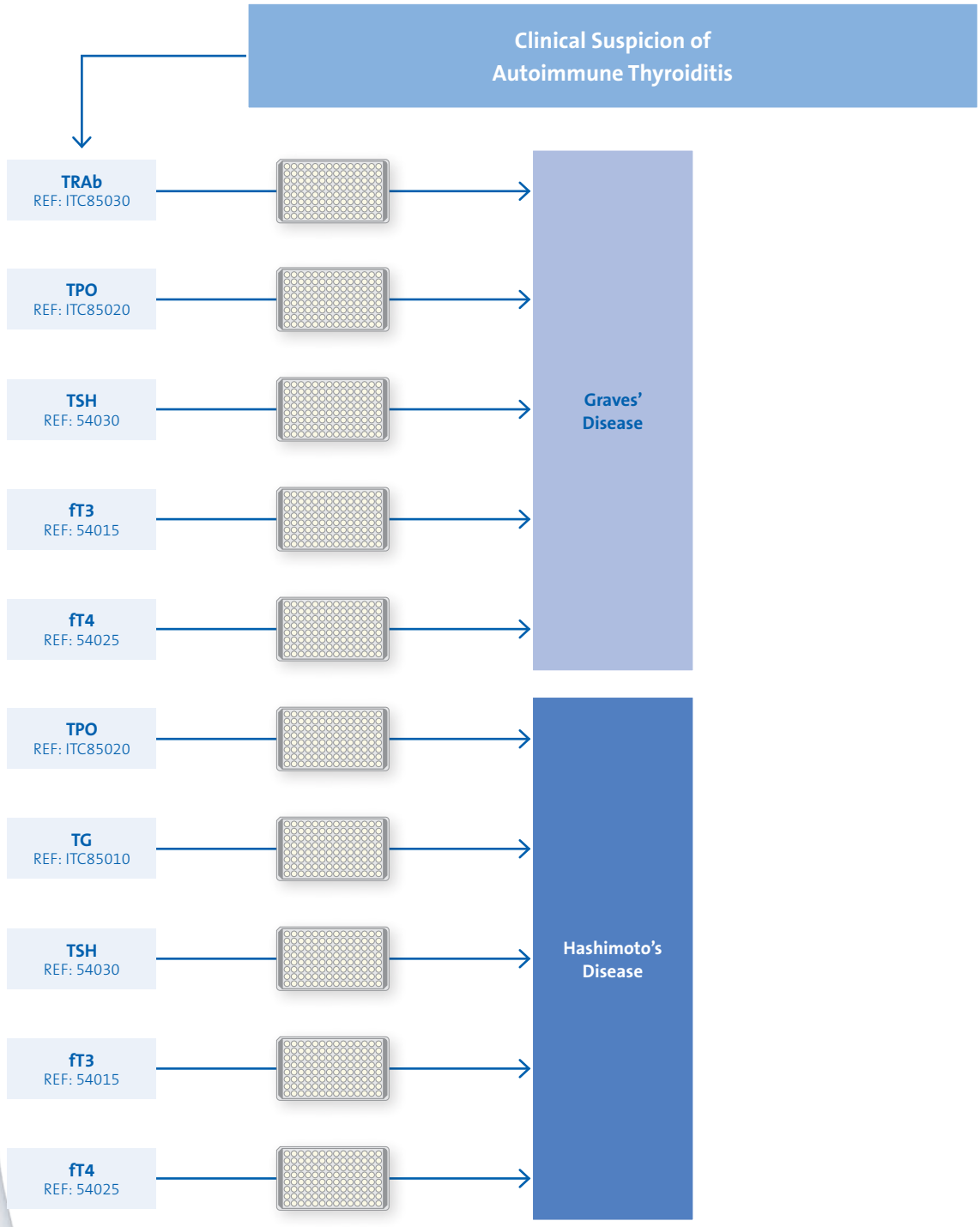
- Depression
- Fatigue
- Heat sensitivity
- Struma decreased
- Lack of concentration



Thyroid Diagnosis

Diagnostic Options at a Glance

ELISA



Clinical Relevance		Autoimmune Relevance
Elevated or normal fT3 / fT4 and low TSH (< 0.1mU/ml)	‹ Hyperthyroidism ›	Anti-TSH-receptor-antibodies, anti-TPO-antibodies, low TSH
Elevated or normal TSH (> 4.5mU/ml) and low fT3 / fT4	‹ Hypothyroidism ›	Anti-TG-antibodies, anti-TPO-antibodies, elevated TSH

Endocrinology

ELISA

Detection of thyroid autoantibodies (anti-TPO, anti-TG and anti-TR antibodies)

REF	Format	Unit/Size	Antigen	Calibration	Cut-off
TG-Antibodies Determination of antibodies to thyroglobulin					
ITC85010	IgG	96 tests	Thyroglobulin	Quantitative 15/60/240/960/3840 IU/ml	80 – 200 IU/ml
TPO-Antibodies Determination of antibodies to thyroperoxidase					
ITC85020	IgG	96 tests	Thyroperoxidase	Quantitative 11.5/46/183/732/2930 IU/ml	80 – 150 IU/ml
TSH Receptor Antibodies Determination of antibodies to TSH-receptor					
ITC85030		96 tests	TSH-receptor	Quantitative 1/2/8/40 U/ml	1.1 – 1.5 U/ml

Detection of thyroid hormones

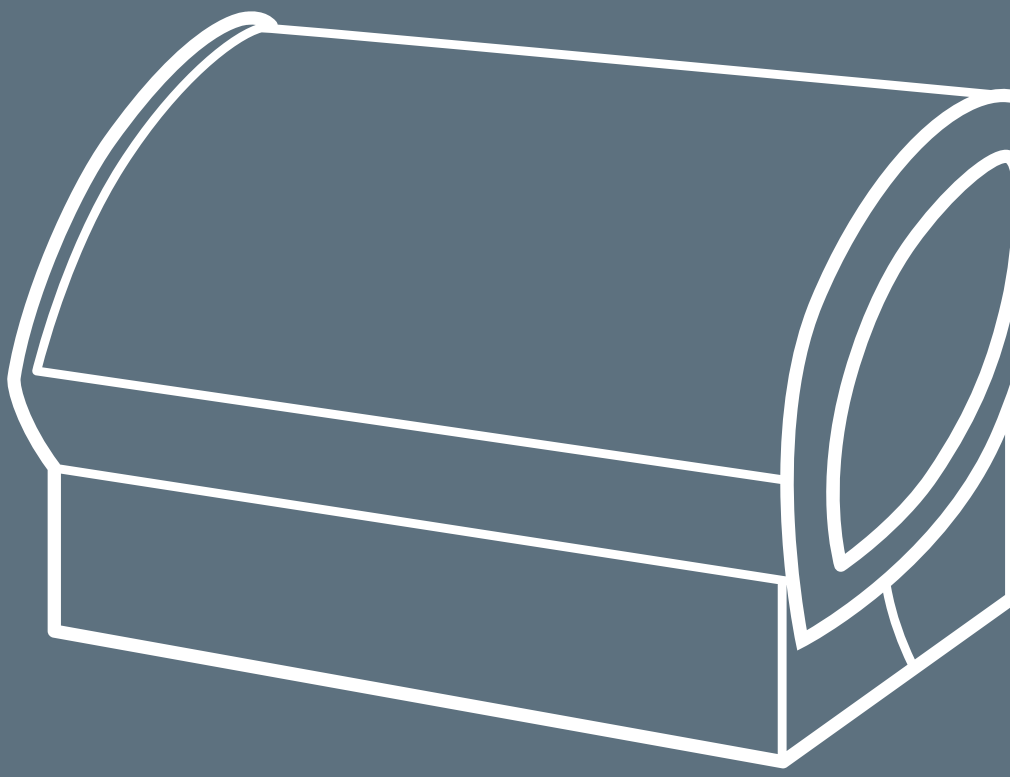
REF	Unit/Size	Antigen	Calibration
fT3 (Free Triiodothyronine) Determination of free Triiodothyronine			
54015	96 tests	T3	Quantitative 0/1/3/5/8/16 pg/ml
fT4 (Free Thyroxine) Determination of free Thyroxine			
54025	96 tests	T4	Quantitative 0/0.40/1.25/2.10/5.00/7.40 ng/dl
TSH (Thyrotropin) Determination of Thyrotropin			
54030	96 tests	TSH	Quantitative 0/0.5/3/6/15/30 mIU/l

Graves ' disease frequently appears together with other autoimmune diseases

- Diabetes mellitus type 1
- Autoimmune gastritis
- Addison's disease
- SLE
- Rheumatoid arthritis

Instruments & Analyzers

HUMAN's autoimmune product line is completed by devices for the automatic processing of ELISAs and line immunoassays.
Fully automated ELISA processing is available for 1, 2 or 4 plates with different test combinations on each plate. The combination of HumaReader Single plus or HumaReader HS together with the Combiwash workstation is designed for low throughput ELISA users. All HUMAN ELISAs are pre-programmed on HUMAN's analyzers, and additional applications can be added at any time.
HumaBlot 44^{FA} is the new, fully automatic system for processing line immunoassays. HumaBlot 44^{FA} performs all steps from processing automatic sample dilutions and reagents, to scanning strips and reporting test interpretations.
The HumaScan software is designed for rapid, easy and objective interpretation of LIA results after manual processing.
The HumaScope Fluo^{LED} fluorescence microscope offers a maximum of flexibility. With up to 4 different fluorescence channels it permits to work with many different fluorescence stains.



LIA Instruments and Analyzers

Fully Automated LIA System

HumaBlot 44^{FA} is the new, fully automated system for processing line immunoassays. HumaBlot 44^{FA} 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. All LIA combinations are possible to run on HumaBlot 44^{FA}.
The settings are preinstalled and validated.

REF	ITC80000

HumaBlot 44^{FA}

Fully automated LIA system

- Processing up to 3 assays simultaneously
- Flexible test number: 1-44 tests
- Tray capacity: 44 strips
- Any LIA combination possible
- Automatic sample dilution
- Fast dry heating system
- Automated LIA band interpretation
- Automatic instrument calibration
- Bidirectional LIS connection

Consumables

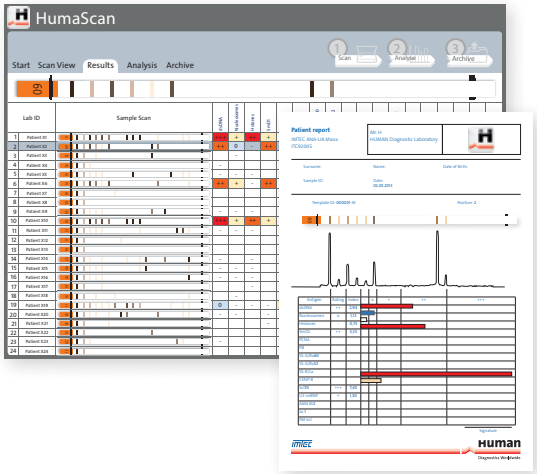
REF	Description
ITC80000/30	Incubation trays (30 pcs)
ITC80000/20	System solution 0.5 l

Accessories

REF	Description
16430/11	2D barcode scanner
ITC80000/15	Rack for Eppendorf tubes

Devices for LIA Processing and Interpretation

The HumaScan software is designed for rapid, easy and objective interpretation of LIA results. The diagnostic report is generated in just a few seconds. Specific autoantibody bands are identified and displayed graphically in an intensity profile for each single patient.



HumaScan

REF	ITC02851

HumaScan

HumaScan software CD + CanoScan LiDE 220 scanner

- Ensures objective and reproducible band interpretation
- Results in a few seconds with a complete patient report
- Capacity: 1-24 tests
- Archive of total scans, single strips and patient results

REF	14570

HumaRock

Rocking shaker

- Tilt angle ± 7°
- Up to 80 rpm
- Universal plug (EU, UK, US)
- Variety of plates
- Delivered without attachment

Accessories

REF	Description
14570/10	Universal attachment with 3 bars
14570/12	Lengthways roller attachment
14570/14	Bar universal attachment black
14570/20	Work plate line immunoassay

ELISA Instruments and Analyzers

The HUMAN ELISA line of instruments and analyzers offers unique solutions for all sizes of laboratories from low to high throughput. All instruments and analyzers come with the HUMAN plug & run capability, meaning that all HUMAN ELISA assays are preprogrammed and individually validated.

Single strip reader and high speed plate reader are designed for low throughput ELISA users:

- HumaReader Line (reader)
- Combiwash (workstation)

Full automation is available for 1, 2 or 4 plates with different assay combinations on individual plates:

- Elisys Uno
- Elisys Duo
- Elisys Quattro

Workstation

With Combiwash, HUMAN offers a workstation for the washing, shaking and incubation of microtiter plates. Flexible washing protocols can be programmed, shaking and incubation are also freely definable.

REF	18460

Combiwash

Automatic microtiter plate washer, shaker and incubator

- Up to 100 wash protocols
- 4 different wash bottles
- 2 incubator positions for 25° C / 30° C or 37° C
- Plate shaking ability

Accessories

REF	Description
18460/5	12-pin manifold
18460/26	110 VA transformer

Combiwash

Readers

Single strip and high-speed plate readers are designed for low throughput ELISA users. Both instruments are easy to use and provide reliable and fast results.

REF	18000

HumaReader Single plus

Microtiter strip reader

- HUMAN assays preprogrammed (plug & run) and user programmable
- Touchscreen
- Automatic strip transport (up to 3 strips)
- Photometer with automatic filter wheel
- Curve and cut-off calculation
- Built-in printer and incubator
- 4 filter wheel: 405, 450, 492, 630 nm installed

Accessories

REF	Description
18001	3 x 12 well boat
16801/20	Thermal printer paper (10 pcs)

HumaReader HS

REF	16670

HumaReader HS

Microtiter plate reader

- HUMAN assays preprogrammed (plug & run) and user programmable
- 8-channel, high-speed reading of full plate in 5 sec
- Memory for 200 tests and 10,000 results
- Touchscreen, Windows® software
- 8 filter wheel: 405, 450, 492, 630 nm installed

Accessories

REF	Description
16670/491	PC mouse with USB
18993L	Laser printer
16670/51	Filter optical 412 nm[1]
16670/52	Filter optical 420 nm[1]
16670/53	Filter optical 490 nm[1]
16670/54	Filter optical 505 nm[1]
16670/55	Filter optical 520 nm[1]
16670/56	Filter optical 540 nm[1]
16670/58	Filter optical 545 nm[1]
16670/59	Filter optical 546 nm[1]

Accessories

REF	Description
16670/57	Filter optical 550 nm[1]
16670/63	Filter optical 570 nm[1]
16670/60	Filter optical 578 nm[1]
16670/62	Filter optical 590 nm[1]
16670/61	Filter optical 595 nm[1]
16670/67	Filter optical 600 nm[1]
16670/65	Filter optical 650 nm[1]
16670/66	Filter optical 655 nm[1]

[1] Spare part set attenuation glasses **REF 16670/82** must be ordered separately!

ELISA Instruments and Analyzers

Automated Analyzers

HUMAN's automated ELISA analyzers cover the requirements of small to large laboratories. Full automation is available for 1, 2 or 4 plates with different test combinations on each plate. Sample barcode reading for secure, automatic sample identification is standard on the larger instruments. All HUMAN ELISA tests are preprogrammed and validated. Additional applications can be added at any time.

REF	17350

Elisys Uno

1-plate fully automated ELISA analyzer including UPS

- Up to 8 parameters simultaneously
- Processing of one microtiter plate
- Time management system
- HUMAN assays preprogrammed (plug & run) and user programmable
- 8 filter wheel: 405, 450, 492, 630 nm installed

Elisys Uno

Accessories

REF	Description
17359/1C	AID predilution rack
17359/10	Blood bank rack
17359/1B	Combined dilution/reagent rack
17359/3	Reagent rack Dengue and H. Pylori
17359/4	Reagent rack HIV and Hepatitis
17359/5	Reagent rack hormone
17359/2	Reagent rack infectious diseases
17359/1	Reagent rack open design
17359/7	Sample rack 96 round sample ø 12 mm
17359/8	Sample rack 96 round sample ø 13 mm
17353/9	Bottle set (wash, waste, rinse)
17353/6	Rinse bottle 1 l with plain cap
17353/2	Rinse bottle 1 l with sensor cap
17353/3	Wash bottle 2 l with sensor cap
17353/7	Wash/waste bottle 2 l plain cap (1 pc)
17353/8	Wash/waste bottle 2 l plain cap (3 pcs)
17353/4	Waste bottle 2 l with sensor cap
18992P	Computer with Windows® 7 (32 Bit)
17901M	TFT screen
18993L	Laser printer

Consumables

REF	Description
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/13	Reagent bottle 15 ml (12 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/14	Reagent bottle 30 ml (12 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)
17350/16	Sample vials 2 ml (500 pcs)
17350/15	Sample vial caps (500 pcs)

UPDATE

REF	17200

Elisys Duo

2-plate fully automated ELISA analyzer including UPS

- Up to 3 plates in one run
- Swing arm mounted „all in one PC“ with Windows® 10
- Continuous loading of reagents, plates and samples
- HUMAN assays preprogrammed (plug & run) and user programmable
- 8 filter wheel with 450 nm and 620 nm installed

Elisys Duo

Movie

Accessories

REF	Description
17200/30	Adapter 100 ml HUMAN square bottle
17200/31	Adapter ring 15 ml closed (set of 4)
17200/27	Adapter ring 15 ml (set of 6)
17200/28	Adapter ring 2.5 ml (set of 6)
17200/29	Adapter ring 16 ml (set of 6)
17200/139	Bottle organizer tray
17200/57	Filter optical 405 nm
17200/55	Filter optical 492 nm
17200/54	Filter optical 532 nm
17200/58	Filter optical 540 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/61	Filter optical 610 nm
17200/50	Filter optical 650 nm
17200/51	Filter optical 690 nm
18993L	Laser printer
17200/26	Rack 2 position square bottle (3 lanes)
17200/24	Rack control
17200/25	Rack reagent (2 lanes)
17200/23	Rack sample

Accessories

REF	Description
17200/124	Square bottle cap
17200/125	Square bottle, PP, 1 l with cap
17200/123	Square bottle, PVC, 2 l without cap
17200/38	Washer bottle 1 l (level switch red)
17200/39	Washer bottle 2 l (level switch blue)
17200/40	Washer bottle 2 l (level switch yellow)

Consumables

REF	Description
16300/10	300 µl disposable tips (10 x 96 pcs)
16300/11	1100 µl disposable tips (10 x 96 pcs)
17200/255	Deep well dilution plate square (40 pcs)
17200/137	Waste bag with ‘Biohazard’ label (10 pcs)
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)

ELISA Instruments and Analyzers

Automated Analyzers

REF	16300

Elisys Quattro

4-plate fully automated ELISA analyzer including UPS

- Walk-away capability
- Up to 7 plates in one run, 4 independent incubators
- Continuous loading
- HUMAN assays preprogrammed (plug & run) and user programmable

Elisys Quattro

Accessories

REF	Description
16300/71	Cable RS232 PCSys/analyzer
17200/124	Cap, bottle 2 l
17200/57	Filter optical 405 nm
17200/55	Filter optical 492 nm
17200/54	Filter optical 532 nm
17200/58	Filter optical 540 nm
17200/53	Filter optical 550 nm
17200/59	Filter optical 570 nm
17200/61	Filter optical 610 nm
17200/50	Filter optical 650 nm
17200/51	Filter optical 690 nm
16300/102	Plate carrier 'A1'
16300/38	Reagent rack 0
16300/40	Reagent rack 2
16300/39	Reagent rack II
16300/40-2	Reagent rack R
16300/41	Sample rack 20 positions
17200/125	Square bottle, 1 l with cap
17200/123	Square bottle, PVC, 2 l without cap
16300/49	Washer bottle 1 l black

Accessories

REF	Description
17200/38	Washer bottle 1 l (level switch red)
17200/39	Washer bottle 2 l (level switch blue)
17200/40	Washer bottle 2 l (level switch yellow)
18992P	PC with Windows® 7 (32 Bit)
17901M	TFT screen
18993L	Laser printer

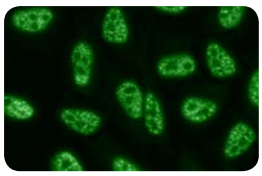
Consumables

REF	Description
16300/10	300 µl disposable tips (10 x 96 pcs)
16300/11	1100 µl disposable tips (10 x 96 pcs)
18631	Dilution cuvettes
17200/137	Waste bag with 'Biohazard' label (10 pcs)
17350/B7	Reagent bottle 7 ml (100 pcs)
17350/B25	Reagent bottle 25 ml (70 pcs)
17350/B100	Reagent bottle 100 ml (10 pcs)

Immunofluorescence Instruments

LED Fluorescence Microscope

The HumaScope Fluo^{LED} microscope combining bright field capabilities with multi-channel fluorescence, to make daily work and fluorescence imaging simple, fast and accessible for every lab. The ergonomic LED microscope can be configured with up to 4 fluorescence LED channels to meet the specific requirements of flexible applications.



HumaScope Fluo^{LED}

LED Fluorescence microscope with trinocular head

- Infinity corrected plan achromatic objectives (antifungal coated) (4x, 10x, 40x and 100x oil)
- Compensation free Siedentopf head, inward 5-position objective revolver
- Koehler illumation
- Extra strong LED illumination, no replacement bulbs required
- Optional up to 4 fluorescence channels available
- Optional with rechargeable batteries

HumaSope Fluo^{LED} Movie

REF	Features
HumaScope Fluo^{LED} State-of-the-art optics	
14800	2-channel LED fluorescence (blue, green)
14804	2-channel LED fluorescence (blue, green) with rechargeable batteries
14801	3-channel LED fluorescence (blue, green, UV)
14802	3-channel LED fluorescence (blue, green, violet)
14803	4-channel LED fluorescence (blue, green, UV, violet)

Appendix

Synonyms
Diseases and Diagnostic Solutions
Index

Synonyms

A

aCL ..... Anti-cardiolipin antibodies

ACPA ..... Anti-citrullinated protein / peptide antibodies (see CCP)

AKA ..... Anti-keratin antibodies

AMA M2 ..... Anti-mitochondrial antigen M2 (pyruvate dehydrogenase complex E2)

ANA ..... Anti-nuclear antibodies

ANCA ..... Anti-neutrophil cytoplasmic antibodies

Annexin A5 ..... see Annexin V

Annexin V ..... Calcium-dependent phospholipid-binding protein outside vessel epthelial cells, prevents coagulation, 36 kDa

aPL ..... Anti-phospholipid antibodies

Apolipoprotein H ..... See β_2GP1

APS ..... Anti-phosopholipd syndrome

ASCA ..... Anti-saccharomyces cerevisiea antibodies

ASO ..... Anti-streptolysin O antigen, 64 kDa

B

β_2GP1 ..... beta$_2$-Glycoprotein

beta$_2$-Glycoprotein 1 .. Lipid-binding glycoprotein of blood, 38 kDa

C

C1q ..... Complement component 1q, receptor for modified immunoglobulins, protein oligomer, 400 kDa

C3d ..... Complement component 3d, proteloytic product of complement component 3, associated with some kinds of CIC

cANCA ..... Cytoplasmic ANCA (see PR3)

CCP ..... Cyclic citrullinated peptide

CIC ..... Circulating immune complex

Centromere ..... Nuclear protein complex which links sister chromatids (see CENP-B)

CENP-B ..... Centromere autoantigen B, part of centromere, 65 kDa

CRP ..... C-reactive protein, inflammation biomarker, 25 kDa

D

dsDNA ..... Double-stranded deoxyribonucleic acid

d-Gliadin ..... Deamidated gliadin (see Gliadin)

DGP ..... Deamidated gliadin peptide (see d-Gliadin)

E

EMA ..... Endomysial antibodies (see tTG)

ENA ..... Extractable nuclear antigens

G

GBM ..... Glomerular basement membrane, the main autoantigen is type IV collagen

Gliadin ..... Wheat protein, main component of gluten

gp210 ..... Glycoprotein of the nuclear pore, 210 kDa

H

Histone ..... Basic proteins involved in DNA packaging, four forming the nucleosome (H2A, H2B, H3, H4), the fifth (H1) linking to nucleosomes

hnRNP A2 / B1 ..... Heterogeneous nuclear ribonucleoprotein A2 / B1 (see RA33), associates with nascent pre-mRNAs, 37 kDa

I

IF ..... see Intrinsic factor

Intrinsic Factor ..... Mucosal glycoprotein (gastric intrinsic factor, GIF) involved in vitamin B12 adsorption, 45 kDa

J

Jo-1 ..... Histidyl-tRNA synthetase, 47 kDa

K

Ku70 / Ku80 ..... Complex of the proteins Ku70, Ku80, and DNA, involved in DNA repair, 70 kDa and 80 kDa

L

La ..... see SS-B/La

LBR ..... Laminin B receptor (LMN2R), protein of the nuclear membrane, 71 kDa

LC1 ..... Liver cytosol antigen 1 (formimidoyltransferase cyclodeaminase, 59 kDa)

LKM-1 ..... Liver-kidney microsomal antigen 1 (cytochrome P450 2D6, 56 kDa)

LPS ..... Lipopolysaccharides

M

Mi-2 ..... DNA / nucleosome-dependent helicase / ATPase, 240 kDa

MPO ..... Myeloperoxidase (see pANCA)

Myeloperoxidase ..... Enzyme expressed in neutrophil granulocytes (see MPO)

N

Nucleosome ..... Chromatin structure, formed by a histone core surrounded by DNA

O

oxLDL ..... Oxidized low-density lipoproteins

P

P0 ..... Ribosomal phosphoprotein P0 (see RPP), 34 kDa (isoform 1), 27 kDa (isoforom 2)

p70 / p80 ..... see Ku70 /Ku80

pANCA ..... Perinuclear antineutrophil cytoplasmic antigen (see MPO)

PAP-1 ..... see Annexin V

PCA ..... Parietal cell antigen (gastric H+ / K+-ATPase, 114 kDa)

PCNA ..... Proliferating cell nuclear antigen, part of DNA polymerase delta, 29 kDa

PL-7 ..... Threonyl-tRNA synthetase (TARS), 83 kDa

PL-12 ..... Alanyl-tRNA synthetase (AARS), 116 kDa

PM-Scl ..... Exosome component 10, involved in RNA degradation, 101 kDa

Phosphatidyl-ethanolamine ..... Phospholipid

Phosphatidylserine ... Phospholipid

PR3 ..... Proteinase 3 (see cANCA), serine protease, 28 kDa

Proteinase 3 ..... see PR3

Prothrombin ..... Coagulation factor II, 70 kDa

R

RA33 ..... Rheumatoid arthritis antigen 33 kDa (see hnRNP A2 / B1)

RF ..... Rheumatoid factor (mainly IgM antibodies)

Rheumatoid Factor ... see RF

Ro 52 ..... see SS-A/Ro 52

Ro 60 ..... see SS-A/Ro 60

RPP ..... Ribosomal phosphoprotein (see P0)

S

Salmonella enterica .. Rod-shaped, Gram-negative, flagellated enterobacteria

Salmonella typhimurium ..... Subspecies of Salmonella enterica

Scl70 ..... DNA topoisomerase I, 91 kDa

SLA/LP ..... Soluble liver antigen / liver pancreas antigen, selenocysteine synthetase, 50 kDa

Sm ..... Smith antigen, complex of the small nuclear ribonucleoprotein (see SmD1)

SMA ..... Smooth muscle antigen (actin and non-actin components of cytoskeleton, see F-actin)

SmD1 ..... Smith antigen D1 (spliceosomal protein SmD1), 16 kDa

Sp100 ..... "Speckled pattern" nuclear protein, 53 kDa

SS-A/Ro 60 ..... Sjögren's syndrome antigen A: Ro, RNA-binding protein, 60 kD

SS-A/Ro 52 ..... Sjögren's syndrome antigen A: Ro, E3 ubiquitin-protein ligase TRIM21, 52 kD

SS-B/La ..... Sjögren's syndrome antigen B: La, Lupus La protein, protects nascent RNA, 47 kDa

ssDNA ..... single-stranded DNA

T

TG ..... Thyroglobulin, 305 kDa

TPO ..... Thyroid peroxidase, 103 kDa

TRAb ..... TSH-R antibodies

TRIM21 ..... E3 ubiquitin-protein ligase TRIM21, (see SS-A/Ro 52)

TSH-R ..... Thyroid-stimulating hormone receptor, thyrotropin receptor, 87 kDa

tTG ..... Tissue transglutaminase 2, protein-glutamine gamma-glutamyltransferase 2, 77 kDa

U

U1-snRNP ..... U1 small nuclear ribonucleoprotein particle

Protein data from www.uniprot.org

Diseases and Diagnostic Solutions

Autoimmune Disease	HUMAN's Diagnostic Solution	Page
Antiphospholipid Syndrome	Phospholipid Screen	32
	Annexin	32
	beta$_2$GP1	32
	Cardiolipin	32 / 33
	oxLDL	33
	Phosphatidylethanolamine	33
	Phosphatidylserine	33
	Prothrombin	33
Autoimmune Hepatitis	Liver LIA	42
	LKM-1	42
Celiac disease	Gastro-LIA	46
	tTG	47
	d-Gliadin	47
Circulating Immune Complex	CIC IgG	35
	Complement activity	35
	C3d CIC	35
Crohn's Disease	Gastro-LIA	46
Eosinophile Granulomatosis with Polyangiitis	Vasculitis LIA	28
	MPO	29
Goodpasture's Syndrome	Vasculitis LIA	28
	GBM	29
	MPO	29
Granulomatosis with Polyangiitis	Vasculitis LIA	28
	PR3	29
Graves' Disease	TPO	52
	TRAb	52
	TSH	52
	fT3	52
	fT4	52
Hashimoto's Disease	TPO	52
	TG	52
	TSH	52
	fT3	52
	fT4	52
Juvenile Idiophatic Arthritis	ANA Screen	17
	RF	24
	Cardiolipin	32/33

Autoimmune Disease	HUMAN's Diagnostic Solution	Page
Microscopic Polyangiitis	Vasculitis LIA	28
	MPO	29
Mixed Connective Tissue Disease	ANA-LIA Maxx	20
	ANA-LIA	20
	U1-snRNP	17
Myositis	ANA-LIA Maxx	16
	Myositis LIA	16
	Jo-1	17
Pernicious Anemia	Gastro-LIA	46
Primary Biliary Cirrhosis	Liver LIA	42
	AMA-M2	42
Primary Sclerosing Cholangitis	MPO	29
Reactive Arthritis	Chlamydia	37
	Salmonella	37
	ASO rapid test	37
Rheumatoid Arthritis	CCP	24
	RF	24
	RA33	24
	RF rapid test	25
	CRP rapid test	25
Sjögren's Syndrome	ANA-LIA Maxx	16
(primary & secondary diagnostics)	ANA-LIA	20
	SS-A	17
	SS-B	17
Systemic Lupus Erythematosus (SLE)	ANA Screen	17
	ANA-LIA Maxx	16
	ANA-LIA	20
	dsDNA	21
	C1q	21
	Histone	20
	Nucleosome	21
	SmD1-Antibodies	21
	SS-A/Ro	17
	SS-B/La	17
	U1-snRNP	17
	SLE rapid test	21
Systemic Sclerosis	ANA-LIA Maxx	16
	ANA-LIA	20
	Scl70-Antibodies	17

Index

A

AMA M2 42
ANA Screen 17
ANA Screen (cut-off) 17
ANA-LIA 20
ANA-LIA Maxx 16/20
Annexin V-Antibodies Screen 32
Anti-C1q-Antibodies 21
ASO HumaTex 37

B

beta$_2$-Glycoprotein 1-Antibodies IgG, IgM 32
beta$_2$-Glycoprotein 1-Antibodies Screen 32

C

C1q-Antibodies 21
C3d-CIC 35
Cardiolipin-Antibodies IgG 33
Cardiolipin-Antibodies IgM 33
Cardiolipin-Antibodies Combi 32
Cardiolipin-Antibodies Screen 32
Chlamydia Trachomatis IgA, IgG 37
CIC IgG 35
CCP-Antibodies 24
Complement Activity 35
Combiwash 56
CRP HumaTex 25

D

dsDNA-Antibodies 21
d-Gliadin-Antibodies IgA, IgG 47

E

Elisys Uno 58
Elisys Duo 59
Elisys Quattro 60
ENA Screen (cut-off) 17
ENA Profile 21

F

fT3 (Free Triiodothyronine) 52
fT4 (Free Thyroxine) 52

G

Gastro-LIA 46
GBM-Antibodies 29
Glycin NaCl Buffer 21/25/37

H

HumaBlot 44^{FA} 54
HumaReader HS 57
HumaReader Single plus 57
HumaRock 55
HumaScan 55
HumaScope Fluo^{LED} 61
HumaTex RF 25
HumaTex CRP 25
HumaTex ASO 37

J

Jo-1-Antibodies 17

L

Liver-LIA 42
LKM-1-Antibodies 42

M

MPO-ANCA 29
Myositis-LIA PL 16

N

Nucleosome-Antibodies 21

O

oxLDL-Antibodies Ig(GM) 33

P

Phosphatidylethanolamine-Antibodies Screen . . 33
Phosphatidylserine-Antibodies IgG, IgM 33
Phosphatidylserine-Antibodies Screen 33
Phospholipid-Antibodies Screen 32
PR3-ANCA 29
Prothrombin-Antibodies Screen 33

R

RA33-Antibodies 24
RF HumaTex 25
RF IgA, IgG, IgM 24
RF Screen 24

S

Salmonella-Antibodies IgA (cut-off) 37
Salmonella-Antibodies Screen (cut-off) 37
Scl70-Antibodies 17
SmD1-Antibodies IgG 21
SS-A/Ro-Antibodies 17
SS-B/La-Antibodies 17
SLE Latex Test 21

T

TG-Antibodies 52
TPO-Antibodies 52
TSH-Receptor Antibodies 52
TSH (Thyrotropin) 52
t-Transglutaminase-Antibodies IgA, IgG 47

U

U1-snRNP-Antibodies 17

V

Vasculitis-LIA 28

Notes

Notes

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