

Anti nuclear antibodies ANA

Anti-nuclear antibodies, ANA screening

General:

Anti-nuclear antibodies (ANA) contain all kinds of autoantibodies against nuclear antigens. Their targets are cell components in the nucleoplasm, in the nucleolus and partially in the cytoplasm. Immunofluorescence testing (IF) can show different fluorescent patterns: polynucleotides (ssDNA, dsDNA, ssRNP, dsRNP), histones (H1, H2A, H2A-H2B complex, H2B, H3, H4, H5), DNA-histone-complexes, chromosomal antigens, ribonuclear proteins (Sm, U1-n-RNP, SS-A/Ro, SS-B/La, To), non-histone proteins (PM1, Mi, Jo-1, Ku, Ma, PCNA), nucleolar antigens (Scl 70, 4-6 s RNA, 7 s RNA). A specific differentiation of anti-Sm, anti-RNP, anti-Scl 70, anti-SS A/Ro, anti-SS-B/LaB etc. is possible using ANA Profile (IA).

Indication: Collagenosis screening

Material: 1 ml serum

Stability: up to 14 days at 2 to 8°C

TAT: 3 days, FML

Method: IFT

Ref.- range: <1:100

Note: slightly increased titers (up to 1:100) are frequent and increase with age, immunosuppressive therapy can provoke false negative results

• Anti-nuclear antibodies, ANA profile

General:

This blot detects autoantibodies against against Mi-2, Ku, nRNP/Sm, Sm, SS-A (SS-A native and Ro-52), SS-B/La, Scl-70, Pm/Scl, Jo-1, centromere B (CENP B), PCNA, dsDNA, nucleosomes, histones and ribosomal P-protein.

Material: 1 ml serum

Stability: up to 14 days at 2 to 8°C

TAT: 3 days, FML

Method: BLOT

- **Antinuclear antibodies, IgG**

Material: 1 ml serum

Stability: up to 14 days at 2 to 8°C

TAT: 3 days, FML

Method: IFT

Units: titre

Ref.range <1:100

Syndrome	ds DNA Abs Frequency (%)
Systemic LE (active)	60-90
Systemic LE (inactive)	60
Discoid LE	25
Drug induced LE	3
Collagenosis with a negative ANA test	5
SHARP syndrome (MCTD)	22
Sclerodermia	27
Sjogren syndrome	25
Juvenile rheumatoid arthritis	4
Polymyositis/dermatomyositis	21
Myasthenia gravis accent	12
Thyreotoxicosis	20
Healthy	0-5

Disease	ANA positive in % of the cases
Autoimmune hemolytic anemia	40-50
Autoimmune chronic active hepatitis, CAH	30-50
Autoimmune thyroiditis	20-40
CREST syndrome	95
Discoid LE	21-50
Dermatomyositis	40
Drug induced LE	95
Mononucleosis	30-70
Myasthenia gravis	35-50
Polymyositis	40
Primary biliary cirrhosis, PBC	40
Rheumatoid arthritis	50
Pregnancy	50
SHARP syndrome = MCTD	99
Sjogren syndrome	50
Sclerodermia	30
Systemic LE	99

Disorders in which ANAs can appear:

multiple sclerosis, healthy relatives of collagenosis patients, malignomas, paraneoplastic

leukemia, psoriasis, hemodialysis patients, infectious diseases, healthy elder persons, pregnancy.

ANA fluorescence patterns:

Fluorescence Pattern	Cell Target	Associated Disease
Nuclear		
Homogeneous	ds-DNA, ss-DNA	SLE, Discoid Lupus, Autoimmune Hepatitis (CAH), Rheumatoid Arthritis (RA)
Homogeneous, annular	ds-DNA	SLE
Nucleolar	PM1 (PM-Scl), RNA	Viral infections, polymyositis, progressive scleroderma, overlap syndrome, primary pulmonary hyper-tension
Nucleoli homogeneous	Scl 70	PSS
Fine speckled	SS-A (Ro), SS-B (La)	Sjogren's Syndrome, SLE, scleroderma
Speckled, coarse granular	U1-RNP, sm	MCTD, SLE, overlap Syndromes
Centromere	CENT A-E	PSS, limited scleroderma / CREST, Raynaud's Phenomenon
Proliferating Cell Nuclear Antigen (PCNA)	Cyclin	SLE - often associated with glomerulonephritis
Nuclear Dots	p80 coilin, SP100	Autoimmune and viral liver disease, PBC
Cytoplasmic		
Fine speckled	Jo-1	Polymyositis
Mitochondrial	M2	Primary Biliary Cirrhosis, Scleroderma

ER	Cytochrome P450	Drug Induced Hepatitis
Golgi	Various	SLE (rare), Sjogren's Syndrome
Cytokeratin	Cytokeratin	Rheumatoid Arthritis, Mixed Connective Tissue Disease, Autoimmune Hepatitis, Crohn's Disease, Squamous Cell Car-cinoma of Lung

For complete list of laboratory test offered at Freiburg Medical Laboratory, please visit <http://www.fml-dubai.com/parameter-listings/>