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Firstly d in the early 1980s, in individuals with diverse connective tissue diseases

By 1993, a more specific link emerged, highlighting the association of anti-RNA polymerase III antibodies (ARA) with diffuse systemic sclerosis (dSSc)

**Target antigen:** RNA Polymerase (RP)11 and RP155 subunits

**Screening technique:**

**Indirect Immunofluorescence(IIF) using HEp-2 cells**  
Difficult pattern categorization :The fluorescence aspect on HEp-2 cells is rarely suggestive

**IIF pattern on HEp-2 cells:**

(A) Fine-speckled nucleoplasmic stain with additional occasional bright dots. (B) Fine-speckled nucleoplasmic stain with additional occasional bright dots accompanied by punctate (speckled) nucleolar staining

**Anti-RNA polymerase III antibodies**


**Main disease: Systemic Sclerosis (SSc)**

Part of the international ACR/EULAR 2013 criteria ; weight=3 points.  
Reported in very rare cases in other autoimmune diseases such as Lupus Nephritis and Overlap syndromes with Sjögren's syndrome

**Clinical features in SSc:**

- Diffuse cutaneous involvement
- Cardiac involvement
- Scleroderma renal crisis
- Higher risk of cancers

⇒ **More severe prognosis**



**Confirmation techniques:**

- Immunoprecipitation : **Gold standard**, but unsuitable for screening
- **ELISA (Enzyme-Linked Immunosorbent Assay):**  
**Detects only anti-RP155**  
Prevalence between 6-9% in SSc
- **Line/dot blot immunoassays +++:**  
**Detects both anti-RP155 and anti-RP11**  
High sensitivity and specificity, Easy to perform, rapid

