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- Firstly reported in **2007** in a woman presenting with interstitial lung disease (ILD) and myositis.
- The **eighth** of antibodies associated with anti-synthetase syndrome (ASS)

- **Family:** Antisynthetase specific antibodies
- **Target antigen:** phenylalanyl-tRNA synthetase

Main disease: Anti Synthetase Syndrome (ASS)

- Rare < 1% and possible higher prevalence in younger adults
- **Not included in the ACR/EULAR 2017 classification criteria of inflammatory myopathies or any of its sub-groups**
- Sensitivity / Specificity= Not Characterized
- Predominance female is suggested (around 66% in current cohorts)

Suggested clinical features of anti-ZO-ASS:

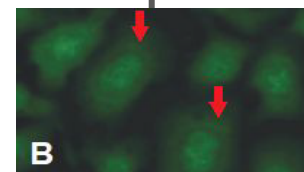
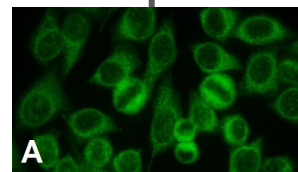
- **Interstitial Lung Disease** is common, and it is associated with the other known features of ASS such as muscle damage, arthritis, Raynaud's phenomenon or cutaneous manifestations.
- Possible genetic association with the **HLA 8.1 ancestral haplotype**
- Possible co-occurrence with anti-ENA especially **anti-RO52** in patients with myositis with a more severe ILD.



Anti-Zo antibodies

Screening technique: Indirect Immunofluorescence (IIF) on HEp-2 cells
Limitations: Lack of sensitivity due to a weakened signal caused by low antigen expression

IIF pattern on HEp-2 cells:
Fine speckled cytoplasmic pattern; **A:** serum positive for **anti-Zo**; **B:** serum positive for **anti-Zo** and **anti-Ro52** in a patient with Sjögren's syndrome



Confirmation techniques:

- 1- Immunoprecipitation of radiolabeled proteins (FARSA α / β)**
 - Advantages: gold standard method; improved sensitivity and specificity
 - Limitations: Complex, time-consuming, requires significant quantities of antigens and handling of radioisotopes Not well-suited for routine use
- 2- Line/Dot blot immunoassays (DIA): DOT- myositis**
 - **Advantages:** Fast, easy to use adapted for routine practice. It provides a semi-quantitative result
 - **Limitations:** Lack of a standardized protocol
- 3- Line immunoassays (LIA):** few validation studies on anti-Zo
- 4- Immunodepletion using a reference serum**
- 5- Mass spectrometry**

