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## SS-56: a novel auto-antigen

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## Keywords

La, lupus, Ro, Sjogren syndrome, SSA, SSB

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## Context

Antibodies to the Ro (SSA) and La (SSB) antigens are common in patients with Sjogren's syndrome and systemic lupus erythematosus (SLE). These autoantibodies are known to be associated with specific clinical phenotypes, and skin involvement and congenital heart block in particular. In a differential display analysis on CD8<sup>+</sup> cells untreated or treated with Murabutide, a drug active against HIV replication, the authors detected and cloned a novel protein of 56kDa (predicted). This protein, called SS-56, was 66% homologous and 43% identical to the SSA/Ro antigen. Therefore, the authors decided to investigate if there were autoantibodies to SS-56.

## Significant findings

Antiserum against SS-56 recognized a 63 kDa band in lysates of several cell lines and gave cytoplasmic and perinuclear staining. In an [ELISA](#) assay, 16 of 25 (64%) of Sjogren's syndrome and 15 of 22 (68%) SLE patients had antibodies to SS-56 in their sera, while 2 of 25 (8%) healthy persons were anti-SS-56 positive. Of patients with Sjogren's Syndrome and SLE, respectively, 32% and 45% were found positive for SSA, and 20% and 27% for SSB (all by [ELISA](#)). In SLE patients positive for SS-56 antibodies there was a trend towards more organ (mostly renal) involvement. Half of the patients with either disease and no SSA or SSB antibodies still had antibodies to SS-56. Sera of three out of six patients tested by immunoblot recognized SS-56 in HeLa cell extracts. The authors conclude that their work defines a new cellular target of autoimmune responses and point out that patients negative for antibodies to SSA and SSB are still positive for SS-56 autoantibodies.

# Comments

This study involves rather low numbers of patient and control sera, a relatively small % of Sjogren's Syndrome patients with antibodies to SSA and SSB, and the immunoblots show quite weak reactivity. Accordingly, these data should be interpreted with caution. However, if repeat studies support these results, antibodies to SS-56 may be an interesting addition to the growing family of autoantibodies found in Sjogren's syndrome and SLE. As the authors correctly point out, it will be interesting to survey the whole range of autoimmune diseases and to determine whether autoantibodies to SS-56 are of pathogenic potential.

# Methods

Differential display, cDNA cloning, mouse antiserum, northern blotting, western blotting, indirect immunofluorescence, [ELISA](#), immunoblotting

# Additional information

## References

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