Antigen Overview:

Sjögren’s syndrome (SS) is a common systemic autoimmune inflammatory disorder characterised by lymphocyte-mediated destruction of exocrine glands leading to diminished or absent glandular secretion14,15. SS may present as a primary disease or in association with other systemic autoimmune diseases (referred to as secondary SS).

Autoantibodies to the La(SSB) antigen can be detected in the sera of up to 87% of patients with primary or secondary SS16. The presence of anti-La(SSB) autoantibodies usually coincides with the presence of anti-Ro(SSA) autoantibodies7, however the fact that anti-Ro autoantibodies are far more common in other rheumatological conditions such as systemic lupus erythematosus (SLE) and mixed connective tissue disease (MCTD) suggests that anti-La is more specific for primary and secondary SS than anti-Ro8,9. Anti-La autoantibodies have also been reported to be present in other clinical conditions, most notably in the sera of mothers of infants with neonatal lupus syndrome10, but also in 10 to 15% of SLE patients11,12. La(SSB) antigen binds to the oligo(U) 3’ termini of nascent RNA polymerase III transcripts and facilitates transcriptional termination and reinitiation by this enzyme13-17. It has also been reported to function as an ATP-dependent helicase able to melt RNA-DNA hybrids18. La(SSB) may be involved in other processes as well such as maturation and/or nuclear export of RNA polymerase III products and some aspects of translation19,20. A La(SSB) is a highly phosphorylated protein which migrates at approximately 43 kDa in SDS-polyacrylamide gel electrophoresis21. Phosphorylated residues are present at the carboxy-terminal part of the protein22. At least 8 isoelectric forms (pI range 6 to 7) have been identified22. The amino acid sequences of both human and bovine La(SSB) antigen have been determined by cDNA cloning and sequencing23,24. The broad cross-reactivity of patient sera with La(SSB) from hybrids18. La(SSB) may be involved in other processes as well such as some aspects of translation19,20. It has also been reported to function as an ATP-dependent helicase able to melt RNA-DNA hybrids18. La(SSB) is a highly phosphorylated protein which migrates at approximately 43 kDa in SDS-polyacrylamide gel electrophoresis21. Phosphorylated residues are present at the carboxy-terminal part of the protein22. At least 8 isoelectric forms (pI range 6 to 7) have been identified22. The amino acid sequences of both human and bovine La(SSB) antigen have been determined by cDNA cloning and sequencing23,24. The broad cross-reactivity of patient sera with La(SSB) from diverse mammalian species indicates the presence of conserved epitopes25. The use of bovine La(SSB) antigen for the detection of human anti-La(SSB) antibodies has been described by several authors23-27.

Storage Conditions & Handling:
Store at -65°C or below
Avoid repeated freezing and thawing
Storage buffer contains 20% Glycerol as cryoprotectant
Mix before use and keep on ice

Applications:
After coating onto ELISA plates the product will bind autoantibodies to La(SSB)
Positive on Western Blot using sample with autoantibodies to La(SSB)

Results:

Fig. 1. ELISA titration assay of ALA01 La(SSB) antigen using patient serum (1:800 dilution)
Fig. 2. SDSA PAGE of ALA01 La(SSB) antigen; All lanes loaded with 1/uniBc protein concentration
Fig. 3. Western Blot of ALA01 La(SSB) antigen with positive patient serum

References:
2. Block, K.J. et al. (1965) Medicine 44, 187
3. Fox, R.I. et al. (1986) Arthritis Rheum. 29, 577
5. Manousakis, M.N. et al. (1986) Scan. J. Rheumatol. 61, 89

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