

AROTEC La(SSB) Native Antigen - ALA01

Product Datasheet

Product information:

Product Name:	La(SSB) antigen
Description:	Purified native protein
Source Material:	Calf Thymus
Purity:	>90% pure (by SDS-PAGE)

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 secretion¹⁻⁴. 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 SS^{5,6}. 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-Ro^{8,9}. 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 patients^{11,12}.

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 translation^{19,20}. 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 identified²³.

The amino acid sequences of both human and bovine La(SSB) antigen have been determined by cDNA cloning and sequencing^{19,28}. Comparison of the two sequences shows 22 largely conservative amino acid substitutions with a total of 95% identity. Three regions of the La molecule (amino acids 1-107, 111-242 and 346-408) are thought to contain the major epitopes reactive with human anti-La sera^{19,24}. 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 authors²⁵⁻²⁷.

Ordering Information:

ALA01-02 - La(SSB) antigen (native) - 0.20 mg

ALA01-10 - La(SSB) antigen (native) - 1.0 mg

Custom pack sizes available on request

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)

Product Profile:

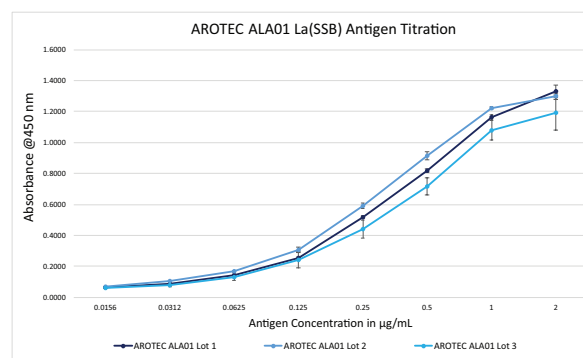


Fig. 1

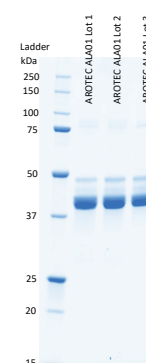


Fig. 2

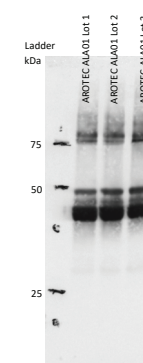


Fig. 3

Fig.1. ELISA titration assay of ALA01 La(SSB) antigen using patient serum (1:800 dilution)

Fig.2. SDS PAGE of ALA01 La(SSB) antigen; All lanes loaded with 1µg protein concentration

Fig.3. Western Blot of ALA01 La(SSB) antigen with positive patient serum

References:

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