

## Anti-ss/dsDNA [A52] Standard Size Ab00781-14.0

This chimeric human antibody was made using the variable domain sequences of the original Mouse IgG2b format, for improved compatibility with existing reagents, assays and techniques.

**Isotype and Format:** Human IgE, Kappa

**Clone Number:** A52

**Alternative Name(s) of Target:** single-stranded DNA; double-stranded DNA; supercoiled DNA

**UniProt Accession Number of Target Protein:**

**Published Application(s):** crystallize, RIA, ELISA

**Published Species Reactivity:** Species independent

**Immunogen:** A52 mAb was isolated by producing a hybridoma cell line using spleen cells derived from female unimmunized inbred, autoimmune NZB/NZW F1 mice, which serve as a model for human SLE (systemic lupus erythematosus).

**Specificity:** A52 binds to both single- and double-stranded DNA (preference for the single-stranded conformation) as well as supercoiled DNA - has a preference for poly(dG) sequences. Poly(dA), poly(dC), poly(rG) and 23S rRNA do not bind to A52. Micelles of cardiolipin (structural analog of the sugar-phosphate backbone of nucleic acids) was shown to be non-inhibitory by ELISA. Both the sugar-phosphate backbone and the heterocyclic bases of DNA are required for antibody recognition. Anti-nucleic acid autoantibodies are found frequently in SLE patients as well as in mice strains such as NZB/NZW.

**Application Notes:** Binding and specificity studies have been conducted with A52 by RIA and ELISA, using phage  $\phi\chi$  174 DNA, which provides ssDNA and dsDNA of identical sequence, and competition assays were performed using synthetic polynucleotides. The A52 Fab fragment used for structural studies was generated by digestion with papain. (PMID: 24449198)

**Antibody First Published in:** Eilat et al. Monoclonal antibodies to DNA and RNA from NZB/NZW F1 mice: antigenic specificities and NH2 terminal amino acid sequences. J Immunol. 1984 Jul;133(1):489-94.

[PMID:6202791](#)

**Note on publication:** Describes the characterization of the anti-DNA antibodies A52 and D42 - the binding kinetics and specificities were studied using the complete antibody and the individual reconstituted antibody chains. The initial sequence data was also determined.

## Product Form

**Size:**

50 µg Purified antibody.

**Purification:** Affinity Purified using a recombinant lectin column

**Supplied In:** PBS with 0.02% Proclin 300.

**Storage Recommendation:** Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

**Concentration:** 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.