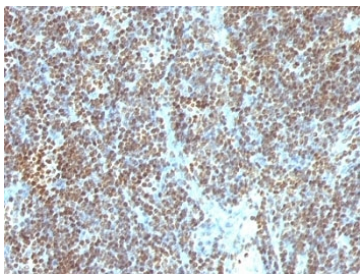
# Double Stranded DNA Antibody / dsDNA [clone SPM603] (V3081)

| Catalog No. | Formulation | Size |
|---|---|---|
| V3081-100UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 100 ug |
| V3081-20UG | 0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide | 20 ug |
| V3081SAF-100UG | 1 mg/ml in 1X PBS; BSA free, sodium azide free | 100 ug |
| V3081IHC-7ML | Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only* | 7 ml |

## Bulk quote request

| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Purified |
| **Host** | Mouse |
| **Clonality** | Monoclonal (mouse origin) |
| **Isotype** | Mouse IgG3, kappa |
| **Clone Name** | SPM603 |
| **Purity** | Protein G affinity chromatography |
| **UniProt** | Not Known |
| **Localization** | Nuclear |
| **Applications** | Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT |
| **Limitations** | This Double Stranded DNA antibody is available for research use only. |



IHC: Formalin-fixed, paraffin-embedded human tonsil stained with Double Stranded DNA antibody (SPM603).

## Description

Double Stranded DNA antibody clone SPM603 is a monoclonal antibody specific for double-stranded DNA, the essential nucleic acid that carries genetic information in eukaryotic and prokaryotic cells. Antibodies directed against dsDNA are widely recognized in both autoimmune research and molecular biology applications. They provide a reliable means of detecting chromosomal material and monitoring DNA integrity. NSJ Bioreagents supplies this antibody for autoimmunity, oncology, and cellular biology studies.

The antibody produces strong nuclear staining in cell and tissue preparations, reflecting the presence of genomic DNA within chromatin. In immunology, dsDNA antibodies are closely associated with systemic lupus erythematosus, one of the most studied autoimmune disorders. Anti-dsDNA autoantibodies represent diagnostic biomarkers and indicators of disease activity. Clone SPM603 provides a consistent reagent for modeling immune recognition of nuclear antigens and evaluating pathogenic mechanisms in lupus.

In apoptosis research, this antibody is used to monitor DNA fragmentation, a hallmark of programmed cell death. Detecting dsDNA breaks enables investigators to track caspase activation pathways and evaluate how cells undergo orderly dismantling during developmental or stress-induced apoptosis.

In oncology, the antibody supports research into DNA damage responses. Cancer cells frequently exhibit genomic instability, and detection of double-stranded DNA damage provides insight into tumor progression and therapeutic response. This antibody has been applied to models assessing DNA integrity following chemotherapy or radiation therapy.

In molecular and cell biology, dsDNA antibody clone SPM603 is used to study chromatin remodeling, replication, and DNA repair mechanisms. Its specificity for double-stranded DNA ensures reproducible results in diverse systems, including cell cultures and tissue sections. This makes it a versatile reagent for basic research and applied sciences alike.

The antibody has also been employed in virology, where double-stranded DNA is a feature of several viral genomes. Detection with this reagent supports investigations into viral replication and host-pathogen interactions.

Validated in multiple experimental platforms, the antibody consistently produces strong nuclear staining with minimal background. Alternate names include dsDNA antibody, double-stranded DNA autoantibody, and nuclear chromatin DNA antibody.

## Application Notes

Optimal dilution of the Double Stranded DNA antibody should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

## Immunogen

Nuclei of Burkitt's cells were used as the immunogen for the Double Stranded DNA antibody.

## Storage

Store the Double Stranded DNA antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Copyright © NSJ Bioreagents. All rights reserved.