SANTA CRUZ BIOTECHNOLOGY, INC.

ds DNA Marker (HYB331-01): sc-58749

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Deoxyribonucleic acid (DNA) is a long polymer of nucleotides that is held together by a backbone made of sugars and phosphate groups. It holds the genetic instructions for the development and function of living things. DNA is crucial for living organisms, and all known cellular life and some viruses contain DNA. In eukaryotes, DNA exists in the cell nucleus, while in prokaryotes, DNA is located in the cytoplasm. In living organisms, DNA does not usually exist as a single molecule, but instead as a tightly-associated pair of molecules in the shape of a right-handed double helix. The two DNA strands are held together by hydrogen bonds as well as forces generated by the hydrophobic effect and π stacking. During replication and transcription, portions of the helix unwind and become single stranded. These single-stranded DNA are surrounded by protective proteins. Double stranded (ds) DNA markers are useful tools in biology research and aid in the study of DNA behavior and characteristics.

REFERENCES

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5. Clausen-Schaumann, H., et al. 2000. Mechanical stability of single DNA molecules. Biophys. J. 78: 1997-2007.
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8. Pidoux, A.L. and Allshire, R.C. 2005. The role of heterochromatin in centromere function. Philos. Trans. R. Soc. Lond., B, Biol. Sci. 360: 569-579.
9. Burge, S., et al. 2006. Quadruplex DNA: sequence, topology and structure. Nucleic Acids Res. 34: 5402-5415.

SOURCE

ds DNA Marker (HYB331-01) is a mouse monoclonal antibody raised against double stranded DNA.

PRODUCT

Each vial contains 50 µg IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

ds DNA Marker (HYB331-01) is recommended for detection of ds DNA by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

SELECT PRODUCT CITATIONS

1. Lan, Y.Y., et al. 2014. Dnase2a deficiency uncovers lysosomal clearance of damaged nuclear DNA via autophagy. Cell Rep. 9: 180-192.
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4. Bonnet, A., et al. 2017. Introns protect eukaryotic genomes from transcription-associated genetic instability. Mol. Cell 67: 608-621.e6.
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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.