

OxiSelect™ 3-Well Comet Assay Slides

CATALOG NUMBER: STA-353: 25 slides / box **STORAGE:** Room Temperature
STA-353-5: 5 x 25 slides / box

SHELF LIFE: 1 year from receipt under proper storage conditions

Background

DNA damage, due to environmental factors and normal metabolic processes inside the cell, occurs at a rate of 1,000 to 1,000,000 molecular lesions per cell per day. While this counts for only a small part of the human genome's approximately 6 billion bases (3 billion base pairs), unrepaired lesions to critical genes can impede a cell's ability to carry out its function and appreciably increase the likelihood of cancer.

The comet assay, or single cell gel electrophoresis assay (SCGE), is a common technique for measurement of DNA damage in individual cells. Under an electrophoretic field, damaged cellular DNA (containing fragments and strand breaks) is separated from intact DNA, yielding a classic “comet tail” shape under the microscope. Extent of DNA damage is usually visually estimated by comet tail measurement; however, image analysis software is also available for measuring various parameters.



Application

Cell Biolabs' OxiSelect™ 3-Well Comet Assay Slides are specially treated for the adhesion of low-melting agarose used in the comet assay. These slides may be used in conjunction with reagents found in our OxiSelect™ Comet Assay Kit (Cat. #STA-351) or with your own comet assay reagents.

Example of Results

The following figures demonstrate typical results. One should use the data below for reference only. This data should not be used to interpret actual results.

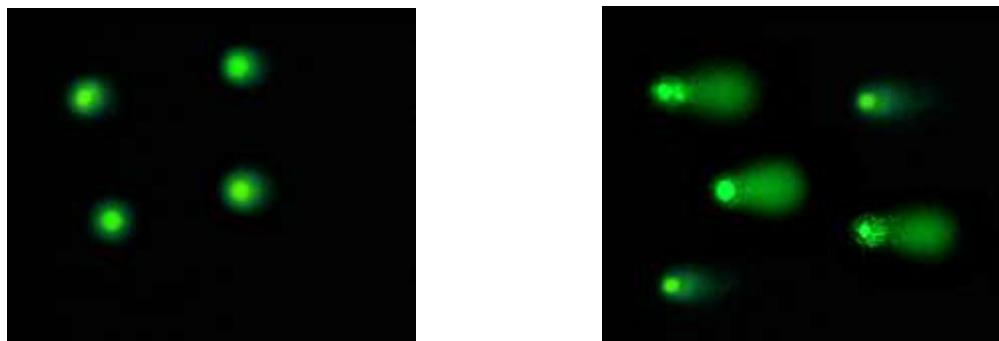


Figure 1. Etoposide Treatment of Jurkat Cells. Jurkat cells were untreated (left) or treated (right) with 20 μ M Etoposide for 4 hours before performing Comet Assay (alkaline electrophoresis conditions, 33 V/300 mA for 15 minutes).

References

1. Ostling, O., and Johanson, K. J. (1984). Micro gel electrophoretic study of radiation induced DNA damages in individual mammalian cells. *Biochem. Biophys. Res. Commun.* **123**, 291–298.
2. Singh, N. P., McCoy, M. T., Tice, R. R., and Schneider, E. L. (1988). A simple technique for quantification of low levels of DNA damage in individual cells. *Exp. Cell. Res.* **175**, 184–191.
3. Olive, P. L., Banath, J. P., and Durand, R. E. (1990a). Heterogeneity in radiation induced DNA damage and repair in tumor and normal cells using the "Comet" assay. *Radiat. Res.* **122**, 86–94.
4. De Boeck, M., Touil, N., De Visscher, G., Vande, P. A., and Kirsch-Volders, M. (2000). Validation and implementation of an internal standard in Comet assay. *Mutat. Res.* **469**, 181–197.

Recent Product Citations

1. Benoit, Y.D. et al. (2021). Targeting SUMOylation dependency in human cancer stem cells through a unique SAE2 motif revealed by chemical genomics. *Cell Chem Biol.* doi: 10.1016/j.chembiol.2021.04.014.
2. Maksimova, V. et al. (2021). HeLa TI cell-based assay as a new approach to screen for chemicals able to reactivate the expression of epigenetically silenced genes. *PLoS One.* **16**(6):e0252504. doi: 10.1371/journal.pone.0252504.

Warranty

These products are warranted to perform as described in their labeling and in Cell Biolabs literature when used in accordance with their instructions. THERE ARE NO WARRANTIES THAT EXTEND BEYOND THIS EXPRESSED WARRANTY AND CELL BIOLABS DISCLAIMS ANY IMPLIED WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR PARTICULAR PURPOSE. CELL BIOLABS' sole obligation and purchaser's exclusive remedy for breach of this warranty shall be, at the option of CELL BIOLABS, to repair or replace the products. In no event shall CELL BIOLABS be liable for any proximate, incidental or consequential damages in connection with the products.

This product is for RESEARCH USE ONLY; not for use in diagnostic procedures.

Contact Information

Cell Biolabs, Inc.
7758 Arjons Drive
San Diego, CA 92126
Worldwide: +1 858-271-6500
USA Toll-Free: 1-888-CBL-0505
E-mail: tech@cellbiolabs.com
www.cellbiolabs.com

©2008-2021: Cell Biolabs, Inc. - All rights reserved. No part of these works may be reproduced in any form without permissions in writing.