

OxiSelect Comet Assay Kit

OxiSelect 96-Well Comet Assay Kit

CATALOG #
AAA44522

PRODUCT SYNONYMS

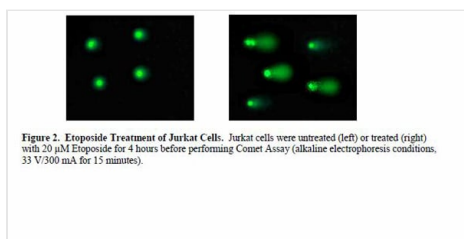
OxiSelect Comet; OxiSelect 96-Well Comet Assay Kit; OxiSelect Comet assay kit

PRODUCT SPECIFICATIONS

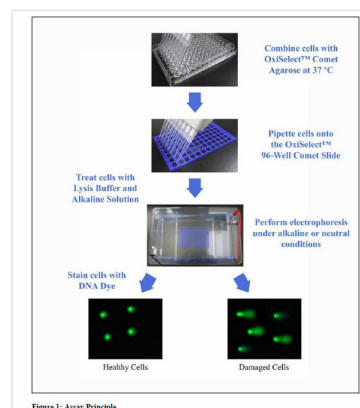
Preparation and Storage

Upon receipt, store the Vista Green DNA Dye at -20 degree C. Store all other kit components at room temperature until their expiration dates.

IMAGES



Application Data



Application Data

ADDITIONAL INFORMATION

Related Product Information for OxiSelect Comet assay kit

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. The OxiSelect™ 96-Well Comet Assay is a fast and sensitive kit for the measurement of cellular DNA damage. Each kit provides sufficient reagents to perform up to 96 assays.

Principle of the Assay: OxiSelect™ 96-Well Comet Assay is a single cell gel electrophoresis assay (SCGE) for simple evaluation of cellular DNA damage. First, individual cells are mixed with molten agarose before application to the OxiSelect™ 96-Well Comet Slide. These embedded cells are then treated with a lysis buffer and alkaline solution, which relaxes and denatures the DNA. Finally, the samples are electrophoresed in a horizontal chamber to separate intact DNA from damaged fragments. Following electrophoresis, the samples are dried, stained with a DNA dye, and visualized by epifluorescence microscopy. Under these conditions, the damaged DNA (containing cleavage and strand breaks) will migrate further than intact DNA and produce a "comet tail" shape (see Figure 1). Each kit provides sufficient reagents to perform up to 96 assays.

Product Categories/Family for OxiSelect Comet assay kit	Oxidative Stress/Damage; DNA/RNA Damage and Repair; Comet Assay Kits and Slides
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. Tyagi, A. et al. (2011). Resveratrol Selectively Induces DNA Damage, Independent of Smad4 Expression, in its Efficacy Against Human Head and Neck Squamous Cell Carcinoma. Clin. Cancer Res. 17:5402-5411.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/assay-kits/oxiselect-comet/44522>