

OxiSelect Comet Assay Kit

OxiSelect Comet Assay Kit (3-Well Slides)

CATALOG #
AAA44549

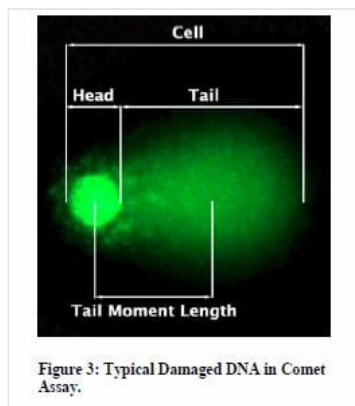
PRODUCT SYNONYMS

OxiSelect Comet; OxiSelect Comet Assay Kit (3-Well Slides); OxiSelect Comet assay kit

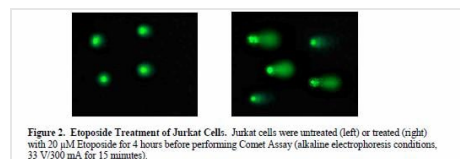
PRODUCT SPECIFICATIONS

Assay Type	Quantitative Sandwich
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.

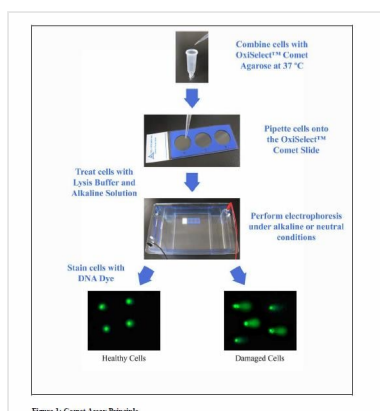
IMAGES



Application Data



Application Data



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™ Comet Assay is a fast and sensitive kit for the measurement of cellular DNA damage. Each kit provides sufficient reagents to perform up to 75 assays. Principle of the Assay: The OxiSelect™ 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™ 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 75 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). Biochem. Biophys. Res. Commun. 123, 291-298. 2. Singh, N. P., McCoy, M. T., Tice, R. R., and Schneider, E. L. (1988). Exp. Cell. Res. 175, 184-191. 3. Olive, P. L., Banath, J. P., and Durand, R. E. (1990). Radiat. Res. 122, 86-94. 4. De Boeck, M., Touil, N., De Visscher, G., Vande, P. A., and Kirsch-Volders, M. (2000). Mutat. Res. 469, 181-197 1. Wang, L. et al. (2014). Osmotic Stress-induced Phosphorylation of H2AX by Polo-like Kinase 3 Affects Cell Cycle Progression in Human Corneal Epithelial Cells. J Biol Chem. 289:29827-29835. 2. Savage, K.I. et al. (2014). BRCA1 Deficiency Exacerbates Estrogen-Induced DNA Damage and Genomic Instability. Cancer Res. 74:2773-2784. 3. Robin, T.P. et al. (2012). EWS/FLI1 Regulates EYA3 in Ewing Sarcoma via Modulation of miRNA-708, Resulting in Increased Cell Survival and Chemoresistance. Mol. Cancer Res. 10:1098-1108. 4. Choi, S.K. et al. (2012). Poly(ADP-Ribose) Polymerase 1 Inhibition Improves Coronary Arteriole Function in Type 2 Diabetes Mellitus. Hypertension. 59:1060-1068.

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/44549>