

OxiSelect DNA Double-Strand Break (DSB) Staining Kit

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CATALOG #
AAA44559

PRODUCT SYNONYMS

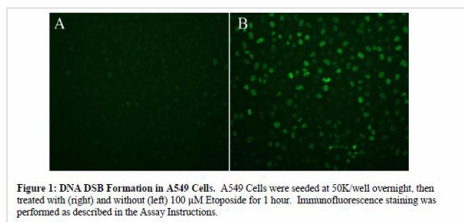
OxiSelect DNA Double-Strand Break (DSB); OxiSelect DNA Double-Strand Break (DSB) Staining Kit; OxiSelect DNA Double-Strand Break (DSB) staining kit

PRODUCT SPECIFICATIONS

Preparation and Storage

Store all kit components at -20 degree C until their expiration dates.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for OxiSelect DNA Double-Strand Break (DSB) staining kit

Background: DNA double-strand breaks (DSBs) are probably the most dangerous of the many different types of DNA damage that occur within the cell. DSBs are generated by exogenous agents such as ionizing radiation (IR) or by endogenously generated reactive oxygen species and occur as intermediates during meiotic and V(D)J recombination. A very early step in the cellular response to DSBs is the phosphorylation of a histone H2A variant, H2AX, at the sites of DNA damage. H2AX is rapidly phosphorylated (within seconds) at serine 139 when DSBs are introduced into mammalian cells resulting in discrete gamma-H2AX (phosphorylated H2AX) foci at the DNA damage sites. H2AX phosphorylation also appears to be a general cellular response to processes involving DSB intermediates including V(D)J recombination in lymphoid cells and meiotic recombination in mice. Phosphorylation of H2A at serine 139 causes chromatin decondensation and appears to play a critical role in the recruitment of repair or damage-signaling factors to the sites of DNA damage. OxiSelect DNA DSB Staining Kit is based on the phosphorylation of the histone H2A.X at serine 139 in response to DNA damaging agents which cause double strand breaks in cells that are cultured in microtiter plates. The kit provides sufficient reagents for up to 100 stainings in 96-well plate.

Product Categories/Family for OxiSelect DNA Double-Strand Break (DSB) staining kit

[Oxidative Stress/Damage](#); [DNA/RNA Damage and Repair](#); [DNA Double-Strand Break Assay](#)

References

1. Rogakou, E. P., Pilch, D. R., Orr, A. H., Ivanova, V. S., and Bonner, W. M. (1998) J. Biol. Chem. 273, 5858-5868.
2. Rogakou, E. P., Boon, C., Redon, C., and Bonner, W. M. (1999) J. Cell Biol. 146, 905-915.
3. Paull, T. T., Rogakou, E. P., Yamazaki, V., Kirchgessner, C. U., Gellert, M., and Bonner, W. M. (2000) Curr. Biol. 10, 886-895.
4. Chen, H. T., Bhandoola, A., Difilippantonio, M. J., Zhu, J., Brown, M. J., Tai, X., Rogakou, E. P., Brotz, T. M., Bonner, W. M., Ried, T., and Nussenzweig, A. (2000) Science 290, 1962-1964.
5. Mahadevaiah, S. K., Turner, J. M. A., Baudat, F., Rogakou, E. P., de Boer, P., Blanco-Rodriguez, J., Jasin, M., Keeney, S., Bonner, W. M., and Burgoyne, P. S. (2001) Nat. Genet. 27, 271-276.
1. Rogakou, E. P., Pilch, D. R., Orr, A. H., Ivanova, V. S., and Bonner, W. M. (1998) J. Biol. Chem. 273, 5858-5868.
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5. Mahadevaiah, S. K., Turner, J. M. A., Baudat, F., Rogakou, E. P., de Boer, P., Blanco-Rodriguez, J., Jasin, M., Keeney, S., Bonner, W. M., and Burgoyne, P. S. (2001) Nat. Genet. 27, 271-276.

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://www.aaabiotech.com/staining-kits/oxiselect-dna-double-strand-break-dsb/44559>