OxiSelect UV-Induced DNA Damage (CPD Quantitation) ELISA Kit

OxiSelect UV-Induced DNA Damage ELISA Kit (CPD Quantitation)

CATALOG #
AAA44502

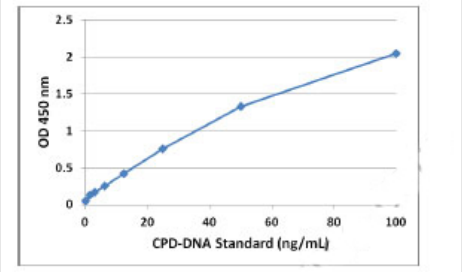
PRODUCT SYNONYMS

OxiSelect UV-Induced DNA Damage (CPD Quantitation); OxiSelect UV-Induced DNA Damage ELISA Kit (CPD Quantitation); OxiSelect UV-Induced DNA Damage (CPD Quantitation) elisa kit

PRODUCT SPECIFICATIONS

Preparation and Storage	Upon receipt, Store the CPD-DNA standard at -20 degree C and all other components at 4 degree C until their expiration dates.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for OxiSelect UV-Induced DNA Damage (CPD Quantitation) elisa kit	Principle of the Assay: CDP-DNA standards or unknown DNA samples are first heat denatured before being adsorbed onto a 96-well DNA high-binding plate. The CPDs present in the sample or standard are probed with an anti-CPD antibody, followed by an HRP conjugated secondary antibody. The CPD content in an unknown sample is determined by comparing with a standard curve that is prepared from predetermined CPD-DNA standards. Background/Introduction: Absorption of ultraviolet (UV) light produces two predominant types of DNA damage, cyclobutane pyrimidine dimers (CPD) and pyrimidine (6-4) pyrimidone photoproducts (6-4PP) (Figure 1). The result is a transition of C to T and CC to TT, which are the most frequent mutations of p53 in both human and mouse skin cancers. UV damaged DNA is usually repaired by nucleotide excision repair (NER) or base excision repair (BER). After UV exposure, cells activate p53 and stall the cell cycle for repair. If the damage is too severe, the cell will trigger apoptosis to get rid of DNA damaged, potentially mutant cells. OxiSelect Oxidative UV-induced DNA Damage ELISA Kit (CPD Quantitation) is an enzyme immunoassay developed for rapid detection and quantitation of CPD in any DNA samples. The quantity of CPD in unknown sample is determined by comparing its absorbance with that of a known CPD-DNA standard curve. Each kit provides sufficient reagents to perform up to 96 assays, including standard curve and unknown samples.
Product Categories/Family for OxiSelect UV-Induced DNA Damage (CPD Quantitation) elisa kit	Oxidative Stress/Damage; DNA/RNA Damage and Repair; UV Induced DNA Damage Kits

References	1. Lippke JA, Gordon LK, Brash DE, Haseltine WA. (1981) Proc Natl Acad Sci U S A. 78:3388-3392 2. Mitchell DL, Nairn RS. (1989) Photochem Photobiol. 49:805-819. 3. Ananthaswamy HN, Loughlin SM, Cox P, Evans RL, Ullrich SE, Kripke ML. (1997) Nat Med. 3:510-514. 4. Soehnge H, Ouhtit A, Ananthaswamy ON. (1997) Front Biosci. 2:D538-D551. 5. el-Deiry WS, Tokino T, Velculescu VE, Levy DB, Parsons R, Trent JM, Lin D, Mercer WE, Kinzler KW, Vogelstein B. (1993) Cell. 75:817-825. 6. Hermeking H, Lengauer C, Polyak K, He TC, Zhang L, Thiagalingam S, Kinzler KW, Vogelstein B. (1997) Mol Cell. 1:3-11. 7. Hill LL, Ouhtit A, Loughlin SM, Kripke ML, Ananthaswamy HN, Owen-Schaub LB. (1999) Science. 285:898-900. 1. Rimann, M. et al. (2015). Standardized 3D bioprinting of soft tissue models with human primary cells. J Lab Autom. doi:10.1177/2211068214567146. 2. Donninger, H. et al. (2015). The RASSF1A tumor suppressor regulates XPA-mediated DNA repair. Mol Cell Biol. 35:277-287. 3. Zirkin, S. et al. (2013). The PIM-2 Kinase is an essential component of the ultraviolet damage response that acts upstream to E2F-1 and ATM. J. Biol. Chem. 288:21770-21789. 4. Burgess, H.M. et al. (2011). Nuclear relocalisation of cytoplasmic poly(A)-binding proteins PABP1 and PABP4 in response to UV irradiation reveals mRNA-dependent export of metazoan PABPs. J. Cell Sci. 124: 3344-3355.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: https://www.aaabiotech.com/elisa-kits/oxiselect-uv-induced-dna-damage-cpd-quantitation/44502