

Product datasheet

DNA demethylase (total) Activity Quantification Ultra Assay Kit ab156908

[1 References](#) [1 Image](#)

Overview

Product name	DNA demethylase (total) Activity Quantification Ultra Assay Kit
Sample type	Cell culture extracts, Tissue Extracts, Nuclear Extracts
Assay type	Quantitative
Assay time	4h 0m
Species reactivity	Reacts with: Plants, Mammals
Product overview	Abcam's DNA demethylase (total) Activity Quantification Ultra Assay Kit (ab156908) is a complete set of essential components which enables an experimenter to measure total DNA demethylase activity/inhibition. The kit can be used with nuclear extracts from a broad range of species such as mammals and plants, in a variety of forms including, but not limited to, cultured cells and fresh tissues.

Notes

DNA demethylation is necessary for the epigenetic reprogramming of genes and is also directly involved in many important disease mechanisms such as tumor progression. Demethylation of DNA can either be passive or active, or a combination of both. Passive DNA demethylation usually takes place on newly synthesized DNA strands via DNMT1 during replication rounds. Active DNA demethylation mainly occurs by the removal of 5-methylcytosine through further modified cytosine bases which have been converted by TET enzyme-mediated oxidation. These oxidation products have been shown to be repaired by TDG, a glycosylase which is involved in base excision repair, or directly converted to cytosine by DNMT3A/ DNMT3B in oxidative states. It is proposed that DNA demethylation could also be initiated by deamination of 5-mC through candidate deaminases including AID and APOBEC1, which convert 5-mC to thymine. The resulting thymine could be repaired by BER initiated by a T-G mismatch glycosylase such as MBD4 or TDG. In addition, the 5-mC base can be directly removed in plants by the DME/ROS1 family of 5-mC DNA glycosylases, resulting in an abasic site that is repaired by the BER process.

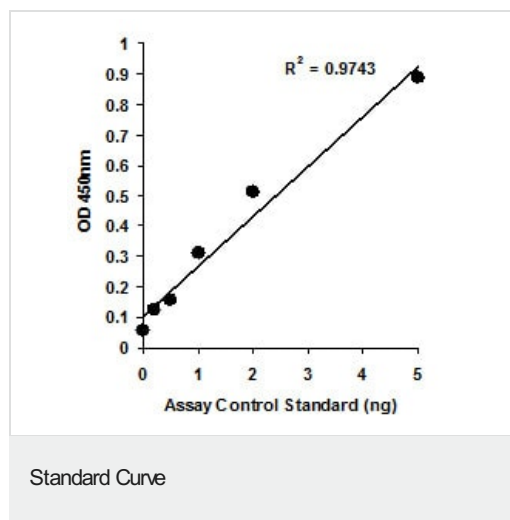
Platform Microplate reader

Properties

Storage instructions Please refer to protocols.

Components	48 tests	96 tests
10X Assay Substrate	1 x 10µl	1 x 20µl
10X Wash Buffer	1 x 14ml	1 x 28ml
8-Well Assay Strips (with Frame)	1 x 6 units	1 x 12 units
Assay Control Standard, 20 µg/mL	1 x 10µl	1 x 20µl
Binding Solution	1 x 5ml	1 x 10ml
Capture Antibody, 1000 µg/mL	1 x 4µl	1 x 8µl
Demethylase Assay Buffer	1 x 3ml	1 x 6ml
Detection Antibody, 400 µg/mL	1 x 6µl	1 x 12µl
Developer Solution	1 x 5ml	1 x 10ml
Enhancer Solution	1 x 6µl	1 x 12µl
Stop Solution	1 x 5ml	1 x 10ml

Images



Assay control standard was added into the assay wells at different concentrations and then measured with Abcam's DNA demethylase (total) Activity Quantification Ultra Assay Kit (ab156908).

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