

KDM6A/ KDM6B Activity Quantification Assay Kit (Colorimetric) ab156910

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Overview

Product name	KDM6A/ KDM6B Activity Quantification Assay Kit (Colorimetric)
Detection method	Colorimetric
Sample type	Cell culture extracts, Tissue Extracts, Cell Lysate, Nuclear Extracts, Purified protein
Assay type	Enzyme activity
Sensitivity	> 10000 ng
Range	1 ng - 20000 ng
Assay time	3h 00m
Species reactivity	Reacts with: Plants, Mammals, Fungi, Other species
Product overview	KDM6A/KDM6B Activity Quantification Assay Kit (Colorimetric) (ab156910) is a complete set of optimized reagents, designed for measuring activity/inhibition of KDM6A and KDM6B using nuclear extracts or purified enzymes from a broad range of species such as mammals, plants, fungi, and bacteria, in a variety of forms including, but not limited to cultured cells and fresh and frozen tissues. There are currently a limited number of methods used for detecting KDM6A/KDM6B activity/inhibition.

The traditional method is based on the measurement of formaldehyde release, a by-product of KDM6A/KDM6B enzymatic reaction, and has significant weaknesses: (1) large amounts (at μg level) of substrate and enzyme are required; (2) nuclear extracts from cell/tissues cannot be used; (3) redox-sensitive KDM6A/KDM6B inhibitors are not suitable for testing with such methods; (4) high interference by SDS, DMSO, thiol-containing chemicals, and ions, which are often contained in enzyme solutions, tested compound solvents, and assay buffers; and (5) less accurate than a direct measurement of KDM6A/KDM6B-converted demethylated products.

KDM6A/KDM6B Activity Quantification Assay Kit (Colorimetric) (ab156910) addresses these issues.

Notes Lysine specific demethylase 6A (KDM6A/UTX) and lysine specific demethylase 6B (KDM6B/JMJD3) demethylase lysine 27 on histone H3, thereby playing a central role in histone code. KDM6A and KDM6B are JmjC (Jumonji)-domain-containing proteins and catalyze the removal of di- and tri-methylation from histone H3-K27 by using a hydroxylation reaction with iron and alpha-glutarate as cofactors.

Platform

Microplate reader

Properties

Storage instructions

Please refer to protocols.

Components	48 tests	96 tests
10X Wash Buffer	1 x 14ml	1 x 28ml
8-Well Assay Strips (with Frame)	1 x 6 units	1 x 12 units
Adhesive Covering Film	1 unit	1 unit
Capture Antibody, 1000 µg/mL	1 x 5µl	1 x 10µl
Co-factor 1	1 x 30µl	1 x 60µl
Co-factor 2	1 x 30µl	1 x 60µl
Co-factor 3	1 x 30µl	1 x 60µl
Detection Antibody, 400 µg/mL	1 x 6µl	1 x 12µl
Developer Solution	1 x 5ml	1 x 10ml
Assay Buffer	1 x 4ml	1 x 8ml
Assay Standard, 50 µg/mL	1 x 10µl	1 x 20µl
Substrate, 50 µg/mL	1 x 60µl	1 x 120µl
Stop Solution	1 x 5ml	1 x 10ml

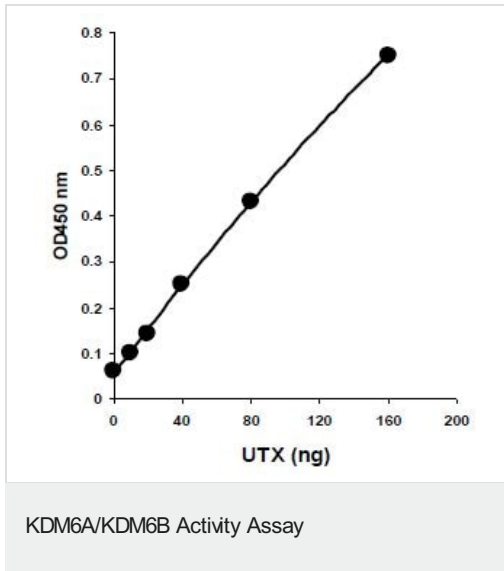
Relevance

Histone demethylase that specifically demethylates 'Lys-27' of histone H3, thereby playing a central role in histone code. Demethylates trimethylated and dimethylated H3 'Lys-27'. Plays a central role in regulation of posterior development, by regulating HOX gene expression.

Cellular localization

Nuclear

Images



Demonstration of high sensitivity of KDM6A/KDM6B activity assay achieved by using KDM6A (UTX) recombinant protein with the KDM6A/KDM6B Activity Quantification Assay Kit (Colorimetric).

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