

KDM6A/KDM6B Activity Quantification Assay Kit (Fluorometric) ab156911

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Overview

Product name	KDM6A/KDM6B Activity Quantification Assay Kit (Fluorometric)
Detection method	Fluorescent
Sample type	Nuclear Extracts, Purified protein
Assay type	Enzyme activity
Sensitivity	10 ng
Assay time	3h 00m
Species reactivity	Reacts with: Plants, Mammals, Fungi
Product overview	<p>KDM6A/KDM6B Activity Quantification Assay Kit (Fluorometric) (ab156911) 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.</p> <p>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 direct measurement of KDM6A/KDM6B-converted demethylated products.</p>
Notes	<p>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.</p>
Platform	Microplate reader

Properties

Storage instructions	Please refer to protocols.
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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
Dilution Buffer	1 x 4ml	1 x 8ml
Fluoro-Developer	1 x 10µl	1 x 20µl
Fluoro-Enhancer	1 x 10µl	1 x 20µl
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

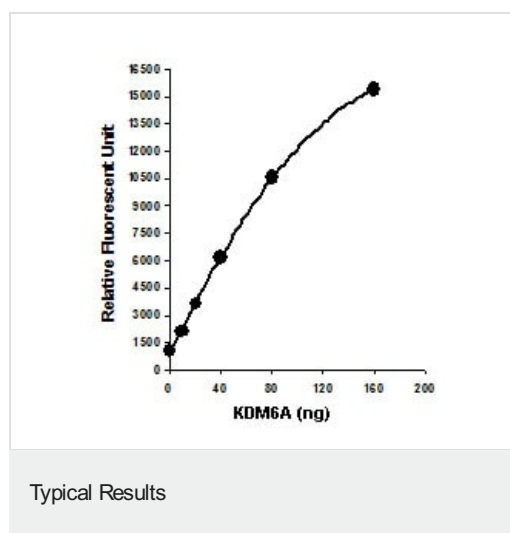
Relevance

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 recombinant protein with the KDM6A/KDM6B Activity Quantification Assay Kit (Fluorometric).

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