

Product datasheet

# KDM1/LSD1 Activity Quantification Assay Kit (Colorimetric) ab113459

2 Images

Overview

**Product name** KDM1/LSD1 Activity Quantification Assay Kit (Colorimetric)  
**Detection method** Colorimetric  
**Assay type** Enzyme activity  
**Assay time** 3h 00m  
**Species reactivity** **Reacts with:** Mouse, Human, Plants

**Predicted to work with:** Mammals, Other species 

**Product overview** KMD1/LSD1 (Lysine Specific Histone Demethylase 1) is a histone demethylase that only acts on mono- or di-methylated lysines. KDM1/LSD1 acts as a co-repressor by mediating demethylation of H3(meK4), a specific tag for epigenetic transcriptional activation.

KDM1/LSD1 Activity Quantification Assay Kit (Colorimetric) (ab113459) is designed for the easy and fast colorimetric measurement of KDM1/LSD1 activity or inhibition. The antibody-based, immunospecific method directly detects KDM1/LSD1-converted demethylated products, rather than by-products, in a 96 stripwell microplate format.

This kit may cross react with LSD2.

**Platform** Microplate reader

Properties

**Storage instructions** Please refer to protocols.

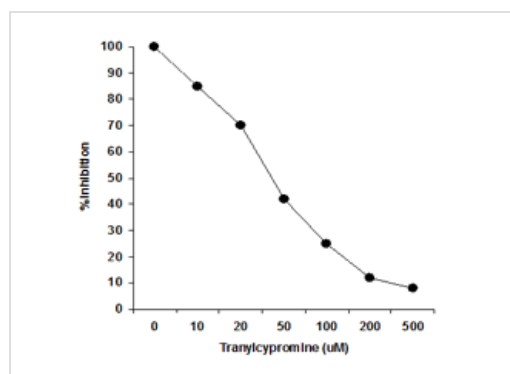
Components	48 tests	96 tests
10X Wash Buffer	1 x 14ml	1 x 28ml
8-Well Assay Strips (with Frame)	6 units	12 units
Adhesive Covering Film	1 unit	1 unit
Capture Antibody, 1000 µg/mL	1 x 5µl	1 x 10µl

Components	48 tests	96 tests
Detection Antibody, 400 µg/mL	1 x 6µl	1 x 12µl
Developer Solution	1 x 5ml	1 x 10ml
LSD1 Assay Buffer	1 x 4ml	1 x 8ml
LSD1 Assay Standard, 50 µg/mL	1 x 10µl	1 x 20µl
LSD1 Inhibitor Tranylcypromine, 1 mM	1 x 20µl	1 x 40µl
LSD1 Substrate, 50 µg/mL	1 x 60µl	1 x 120µl
Stop Solution	1 x 5ml	1 x 10ml

## Relevance

Histone demethylase that demethylates both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Acts as a corepressor by mediating demethylation of H3K4me, a specific tag for epigenetic transcriptional activation. Demethylates both mono- (H3K4me1) and di-methylated (H3K4me2)H3K4me. May play a role in the repression of neuronal genes. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of RCOR1/CoREST to achieve such activity. Also acts as a coactivator of androgen receptor(ANDR)-dependent transcription, by being recruited to ANDR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in ANDR-containing complexes, which mediates phosphorylation of 'Thr-6' of histone H3 (H3T6ph), a specific tag that prevents demethylation H3K4me, prevents H3K4me demethylase activity of KDM1A. Demethylates di-methylated 'Lys-370' of p53/TP53 which prevents interaction of p53/TP53 with TP53BP1 and represses p53/TP53-mediated transcriptional activation. Demethylates and stabilizes the DNA methylase DNMT1. Required for gastrulation during embryogenesis. Component of a RCOR/GFI/KDM1A/HDAC complex that suppresses, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development.

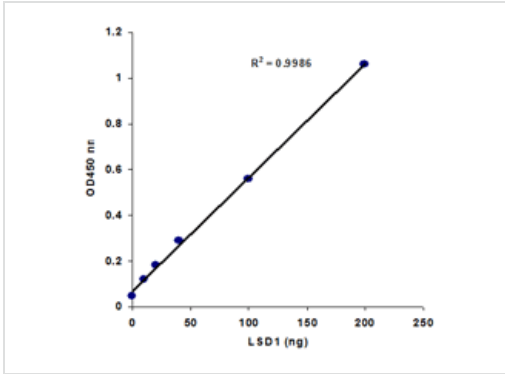
## Images



Demonstration of inhibitory effects of an KDM1/LSD1 inhibitor detected by ab113459. [LSD1 concentration: 200 ng/well]

Functional Studies - KDM1/LSD1 Activity

Quantification Assay Kit (Colorimetric) (ab113459)



Demonstration of high sensitivity of KDM1 / LSD1 activity assay achieved by using recombinant KDM1 / LSD1 with ab113459.

Functional Studies - KDM1/LSD1 Activity  
Quantification Assay Kit (Colorimetric) (ab113459)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
  
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors