abcam

ab251164

# Anti-LSD2 / AOF1 antibody [EPR18508] - BSA and Azide free

Recombinant | RabMAb | KO Validated

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR18508 |

## Reactivity data

### IP

#### Expected

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

### WB

#### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat, Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

# Target data

See full target information KDM1B

**Function** Histone demethylase that demethylates 'Lys-4' of histone H3, a specific tag for epigenetic transcriptional activation, thereby acting as a corepressor. Required for de novo DNA methylation of a subset of imprinted genes during oogenesis. Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed. Demethylates both mono- and di-methylated 'Lys-4' of histone H3. Has no effect on tri-methylated 'Lys-4', mono-, di- or tri-methylated 'Lys-9', mono-, di- or tri-methylated 'Lys-27', mono-, di- or tri-methylated 'Lys-36' of histone H3, or on mono-, di- or tri-methylated 'Lys-20' of histone H4. Alone, it is unable to demethylate H3K4me on nucleosomes and requires the presence of

GLYR1 to achieve such activity, they form a multifunctional enzyme complex that modifies transcribed chromatin and facilitates Pol II transcription through nucleosomes (PubMed:30970244).

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab251164 is the carrier-free version of ab193080.

**Patented technology**

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**What are the advantages of a recombinant monoclonal antibody?**

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Conjugation ready**

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

| | |
|---|---|
| **Activity summary** | LSD2 also known as AOF1 is a lysine-specific demethylase enzyme with a mass of about 105 kDa. This protein mainly functions by removing methyl groups from lysine residues on histone proteins thereby affecting chromatin structure and gene expression. LSD2 is expressed in various tissues with high levels in the liver and brain. The enzyme plays a significant role in regulating gene activity influencing many biological processes. |
| **Biological function summary** | LSD2 impacts gene expression by altering the epigenetic state of chromatin. It is not part of a well-defined large multiprotein complex allowing LSD2 to directly interact with histones. Through its demethylase activity it modulates the transcriptional regulation impacting cellular differentiation and proliferation. This makes it an important factor in maintaining cellular homeostasis. |
| **Pathways** | LSD2 is involved in histone modification processes particularly through the demethylation of H3K4me1 and H3K4me2 marks. These changes are important in the regulation of gene expression patterns. LSD2 often interacts with the REST corepressor complex affecting the expression of genes involved in neural development and function. It plays a role in pathways related to cellular stress responses and metabolic regulation highlighting its importance in cellular adaptation mechanisms. |
| **Associated diseases and disorders** | LSD2 has been implicated in cancer and neurological disorders. Alterations in its expression and activity are associated with certain types of cancers such as breast cancer where it affects tumor growth and progression by influencing gene expression patterns. In neurological contexts LSD2's dysregulation impacts neural circuitry and cognitive functions which can be linked to disorders like Alzheimer's disease. In these conditions LSD2 interacts with proteins such as SIRT1 influencing cellular processes that contribute to disease pathology. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

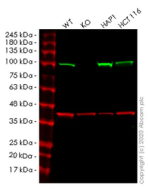
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

## 1 product image




### Western blot - Anti-LSD2 / AOF1 antibody [EPR18508] - BSA and Azide free (ab251164)

LSD2 / AOF1 Western blot staining using rabbit Anti-LSD2 / AOF1 antibody

This data was developed using the same antibody clone in a different buffer formulation (ab193080).
**Lanes 1-4:** Merged signal (red and green). Green - ab193080 observed at 95 kDa. Red - loading control ab8245 observed at 36 kDa.

ab193080 Anti-LSD2 / AOF1 antibody [EPR18508] was shown to specifically react with LSD2 / AOF1 in wild-type HeLa cells. Loss of signal was observed when knockout cell line ab265969 (knockout cell lysate ab258016) was used. Wild-type and LSD2 / AOF1 knockout samples were subjected to SDS-PAGE. ab193080 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) were incubated at room temperature for 2. 5 hours at 1 in 1000 dilution and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-LSD2 / AOF1 antibody [EPR18508] (ab193080) at 1/1000 dilution

Lane 1:
Wild-type HeLa cell lysate at 20 µg

Lane 2:
Western blot - Human KDM1B (LSD2 / AOF1) knockout HeLa cell lysate (ab258016) at 20 µg

Lane 3:
HAP1 cell lysate at 20 µg

Lane 4:
HCT116 cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (ab216773) at 1/10000 dilution

Predicted band size: 92 kDa

Observed band size: 95 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.