# Product Datasheet

## LSD1 Antibody (1B2E5)
## NB100-1762

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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**Publications: 12**

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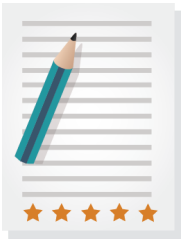
Updated 4/21/2024 v.20.1





# NB100-1762

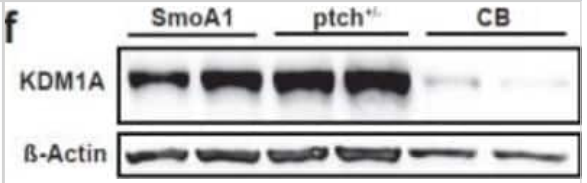
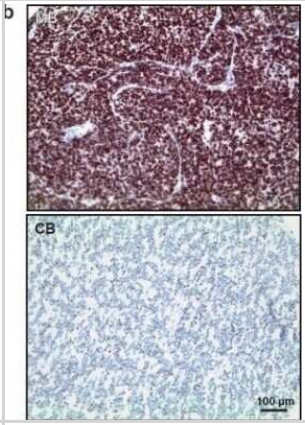
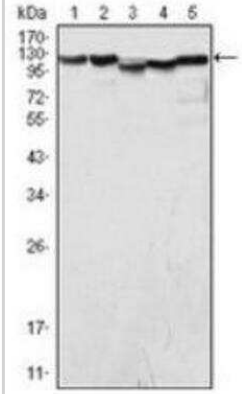
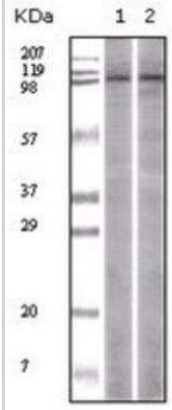
LSD1 Antibody (1B2E5)

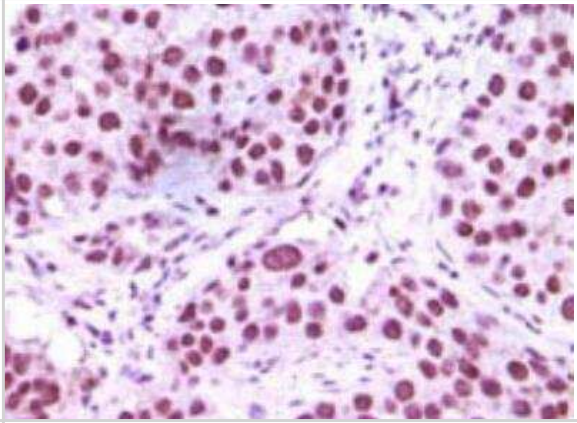
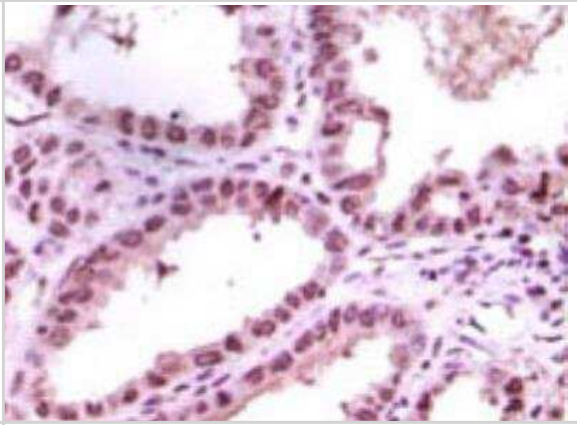
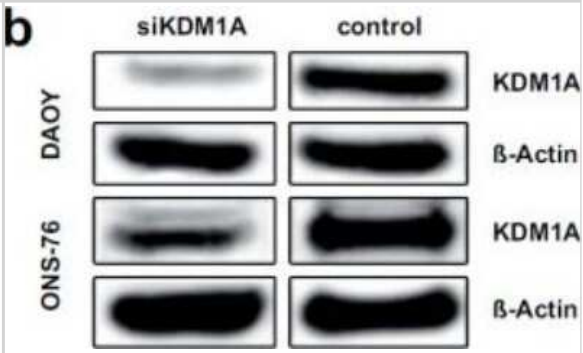
| Product Information | |
|---|---|
| **Unit Size** | 0.1 ml |
| **Concentration** | This product is unpurified. The exact concentration of antibody is not quantifiable. |
| **Storage** | Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. |
| **Clonality** | Monoclonal |
| **Clone** | 1B2E5 |
| **Preservative** | 0.03% Sodium Azide |
| **Isotype** | IgG1 |
| **Purity** | Unpurified |
| **Buffer** | Ascites |
| **Target Molecular Weight** | 93 kDa |

| Product Description | |
|---|---|
| **Host** | Mouse |
| **Gene Symbol** | KDM1A |
| **Species** | Human, Mouse, Primate |
| **Reactivity Notes** | Human, mouse and monkey. |
| **Marker** | Nucleus Marker |
| **Immunogen** | Purified recombinant fragment of human LSD1 (between amino acids 400-600) expressed in E. coli. [UniProt# O60341] |

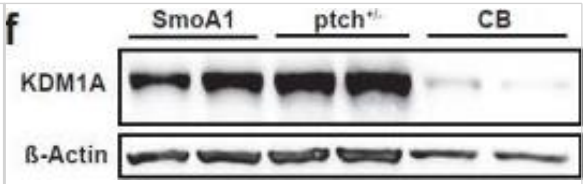
| Product Application Details | |
|---|---|
| **Applications** | Western Blot, Simple Western, ELISA, Immunohistochemistry, Immunohistochemistry-Paraffin, Chromatin Immunoprecipitation (ChIP), Knockdown Validated |
| **Recommended Dilutions** | Western Blot 1:500-1:2000, Simple Western 1:500, ELISA 1:10000, Immunohistochemistry 1:200-1:1000, Immunohistochemistry-Paraffin 1:200-1:1000, Chromatin Immunoprecipitation (ChIP), Knockdown Validated |
| **Application Notes** | This LSD1 (1B2E5) antibody is useful for Western blot, Immunohistochemistry on paraffin-embedded sections and ELISA.<br><br>In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. Separated by Size-Wes, Sally Sue/Peggy Sue.<br>The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors. |

## Images

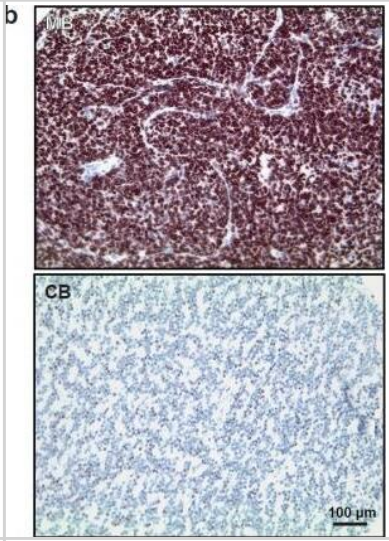
| | |
|---|---|
| Western Blot: LSD1 Antibody (1B2E5) [NB100-1762] - KDM1A is strongly overexpressed in human medulloblastomas, cell lines derived from them and murine medulloblastic tumors. Strong KDM1A protein expression was confirmed in the medulloblastic tumors from SmoA1-and Ptch+/A-mice relative to KDM1A expression in cerebellar tissue (CB) using western blotting of tissue lysates. I2-actin expression was used as a loading control. Image collected and cropped by Citeab from the following publication (The KDM1A histone demethylase is a promising new target for the epigenetic therapy of medulloblastoma. Acta Neuropathol Commun (2013)) licensed under a CC-BY license. |  |
| Immunohistochemistry-Paraffin: LSD1 Antibody (1B2E5) [NB100-1762] - KDM1A is strongly overexpressed in human medulloblastomas, cell lines derived from them and murine medulloblastic tumors. KDM1A protein expresion was evaluated immunohistochemically in a tissue microarray of 70 medulloblastomas (MB) and 9 tissue samples of normal cerebellum (CB). Micrograph showing KDM1A-positive staining in a representative MB sample, and KDM1A-negative staining in CB, scale bar=100AI1/4m. Image collected and cropped by Citeab from the following publication (The KDM1A histone demethylase is a promising new target for the epigenetic therapy of medulloblastoma. *Acta Neuropathol Commun* (2013)) licensed under a CC-BY license. |  |
| Western Blot: LSD1 Antibody (1B2E5) [NB100-1762] - Western blot analysis using LSD1 mouse mAb against COS (1), Hela (2), NIH/3T3 (3), A549 (4) and Jurkat (5) cell lysate. |  |
| Western Blot: LSD1 Antibody (1B2E5) [NB100-1762] - Analysis of LSD1 expression in Hela (1) and Jurkat (2) whole cell lysates. |  |

| | |
|---|---|
| Immunohistochemistry-Paraffin: LSD1 Antibody (1B2E5) [NB100-1762] - Immunohistochemical analysis of paraffin-embedded Human Lung Carcinoma tissue, showing nuclear localization using LSD1 antibody with DAB staining. |  |
| Immunohistochemistry-Paraffin: LSD1 Antibody (1B2E5) [NB100-1762] - Immunohistochemical analysis of paraffin-embedded Human Kidney Carcinoma tissue, showing nuclear localization using LSD1 antibody with DAB staining. |  |
| Simple Western: LSD1 Antibody (1B2E5) [NB100-1762] - Simple Western lane view shows a specific band for LSD1 in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system. *Non-specific interaction with the 230 kDa standard may be seen with this antibody. |  |
| Knockdown Validated: LSD1 Antibody (1B2E5) [NB100-1762] - Knockdown of KDM1A protein was confirmed by western blotting of whole-cell lysates from DAOY and ONS-76 cells. beta-actin served as loading control. Image collected and cropped by CiteAb from the following publication (//pubmed.ncbi.nlm.nih.gov/24252778/) licensed under a CC-BY license. |  |

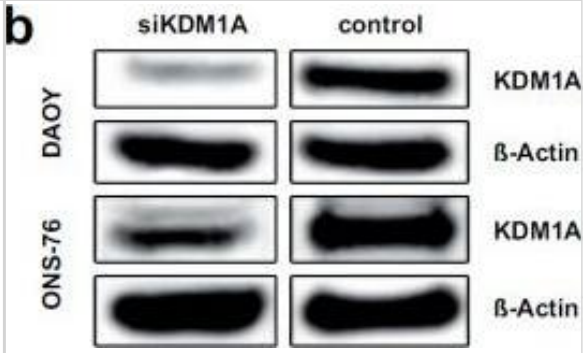
Plasma membrane associated APE1/Ref-1 is bound to ABCA1 in response to acetylation. Cells transiently expressing wild type APE1/Ref-1-FLAG or mutant APE1/Ref-1(K6/7R)-FLAG were treated with 1 μM TSA for 1 h. (A) Whole cell lysates were immunoprecipitated using the monoclonal anti-ABCA1 antibody, followed by immunoblot with the anti-FLAG antibody. (B) For reverse immunoprecipitation, cell lysates were immunoprecipitated with anti-APE1/Ref-1 antibody followed by immunoblot analysis with the polyclonal anti-ABCA1 antibody. Blots were stripped and re-probed with anti-ABCA1 or FLAG antibodies to ensure equal protein loading and no contamination of cellular proteins. Similar results were observed in replicate experiments. Columns, mean (n = 2-3); bars, SE. *, $p < 0.05$ indicates a significantly different result from control cells according to unpaired t-tests. (C) The binding between APE1/Ref-1 and ABCA1 in the plasma membrane was visualized using with a Duolink II PLA system with primary polyclonal anti-APE1/Ref-1 and monoclonal anti-ABCA1 antibodies (PLA†). The PLA-specific fluorescence which represents the APE1/Ref-1-ABCA1 signal, and the DAPI nuclear staining are in red and blue, respectively. The experiment was repeated multiple times with similar results; the data shown here are from a representative experiment. Optical slices were examined using a 40× oil immersion objective with a 2× zoom factor. Scale bar, 20 μm (×80). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/31261750), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




Involvement of N- terminus and C- terminus HIF-2α in IH-induced HIF-2α degradation by calpains. A. Schematic diagram showing the full length, N-terminus (ΔbHLH and ΔbHLH+ΔPAS) and C-terminus (ΔUR, ΔUR +ΔCTAD) deleted constructs. B. Western blot showing HIF-2α protein in PC12 cells transiently transfected with the HIF-2α full length and the two N- and C-terminus truncated constructs and exposed to normoxia (N) or IH. The N-terminus and C-terminus deleted HIF-2α proteins were detected with antibody raised against HIF-2α N-terminus (Acris Antibodies; AP23352PU-N) and C-terminus (Novus Biologicals; NB100-122) respectively. C. PC12 cell lysates expressing the N- and C-terminus deleted protein were incubated for 15 min with purified calpain-1 (3 mg/ml) in presence of 1 mM CaCl2 or 1 mM CaCl2+2 mM EDTA and HIF-2α protein was analyzed by western blot. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/24124516), licensed under a CC-BY license. Not internally tested by Novus Biologicals.




PHD3 depletion stabilizes hypoxic p27 expression by increasing p27 half-life. a Cell cycle arrest at G0 and subsequent release shows an increase of p27 expression in siPHD3 exposed cells. b Quantification for p27 expression under PHD3 depletion at indicated time points after cell cycle release in HeLa and 786-O cells. Asterisk indicates significant difference ($p < 0,05$; $n = 3$). c Cell cycle arrest at G0 and inhibition of protein synthesis with cycloheximide indicate increased p27 stability in PHD3 depleted HeLa cells. d Quantification of p27 expression using siPHD3 or control at indicated time points. Four independent experiments (± SEM) are shown ($p < 0,05$; $n = 4$). e Analysis of p27 stability in 786–0 cells by cycloheximide chase during reoxygenation after 24 h hypoxia demonstrates markedly increased half-life of p27 upon PHD3 depletion Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/26223520), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Antona A, Leo G, Favero F et al. Targeting lysine-specific demethylase 1 (KDM1A/LSD1) impairs colorectal cancer tumorigenesis by affecting cancer cells stemness, motility, and differentiation Cell death discovery 2023-06-29 [PMID: 37385999] (IHC-P)

Details:
Dilution: 1:1500

Haydn T, Kehr S, Willmann D et al. Next-generation sequencing reveals a novel role of lysine-specific demethylase 1 in adhesion of rhabdomyosarcoma cells Int. J. Cancer 2019-11-21 [PMID: 31755110] (WB, Human)

Kim D, Nam H, Lee W et al. PKCa-LSD1-NF-kB-Signaling Cascade Is Crucial for Epigenetic Control of the Inflammatory Response Molecular Cell 2018-01-01 [PMID: 29395062] (Mouse)

Lobo J, Rodrigues A, Antunes L et al. High immunoexpression of Ki67, EZH2, and SMYD3 in diagnostic prostate biopsies independently predicts outcome in patients with prostate cancer Urol. Oncol. 2017-11-22 [PMID: 29174711] (Human)

Pajtler KW, Weingarten C, Thor T et al. The KDM1A histone demethylase is a promising new target for the epigenetic therapy of medulloblastoma. Acta Neuropathol Commun. 2013-05-29 [PMID: 24252778] (WB, IHC-P, Mouse, Human)

Kashyap V, Ahmad S, Nilsson EM et al. The lysine specific demethylase-1 (LSD1/KDM1A) regulates VEGF-A expression in prostate cancer. Mol Oncol. 2015-03-02 [PMID: 23384557] (WB, IF/IHC, Human)

Lim S, Janzer A, Becker A et al. Lysine-specific demethylase 1 (LSD1) is highly expressed in ER-negative breast cancers and a biomarker predicting aggressive biology Carcinogenesis 2010-03-01 [PMID: 20042638] (ELISA, IF/IHC, Chemotaxis, WB, Human)

Serce N, Gnatzy A, Steiner S et al. Elevated expression of LSD1 (Lysine-specific demethylase 1) during tumour progression from pre-invasive to invasive ductal carcinoma of the breast BMC Clin Pathol 2012-08-24 [PMID: 22920283] (IF/IHC, Human)

Schildhaus HU, Riegel R, Hartmann W, Steiner S, Wardelmann E, Merkelbach-Bruse S, Tanaka S, Sonobe H, Schule R, Buettner R, Kirfel J. Lysine-specific demethylase 1 is highly expressed in solitary fibrous tumors, synovial sarcomas, rhabdomyosarcomas, desmoplastic small round cell tumors, and malignant peripheral nerve sheath tumors. Hum Pathol;42(11):1667-75. 2011-11-01 [PMID: 21531005] (IF/IHC, WB, Human)

Kauffman EC, Robinson BD, Downes MJ et al. Role of androgen receptor and associated lysine-demethylase coregulators, LSD1 and JMJD2A, in localized and advanced human bladder cancer. Mol Carcinog. 2015-03-02 [PMID: 21400613] (IF/IHC, Human)

Janzer A, Lim S, Fronhoffs F, Niazy N, Buettner R, Kirfel J. Lysine-specific demethylase 1 (LSD1) and histone deacetylase 1 (HDAC1) synergistically repress proinflammatory cytokines and classical complement pathway components. Biochem Biophys Res Commun. 2012-04-17 [PMID: 22542627] (Chemotaxis, WB, Human)

Bennani-Baiti IM, Machado I, Llombart-Bosch A, Kovar H. Lysine-specific demethylase 1 (LSD1/KDM1A/AOF2/BHC110) is expressed and is an epigenetic drug target in chondrosarcoma, Ewing's sarcoma, osteosarcoma, and rhabdomyosarcoma. Hum Pathol. 2012-01-13 [PMID: 22245111] (IF/IHC, Human)

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## Products Related to NB100-1762

| | |
|---|---|
| NB800-PC1 | HeLa Whole Cell Lysate |
| HAF007 | Goat anti-Mouse IgG Secondary Antibody [HRP] |
| NB720-B | Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin] |
| NBP1-97005-0.5mg | Mouse IgG1 Isotype Control (MG1) |

**Limitations**
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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