

# Product Datasheet

## Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody - BSA Free NBP1-49601

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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**NBP1-49601****Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody - BSA Free**

| <b>Product Information</b> |  |
|----------------------------|--|
| <b>Unit Size</b>           | 0.1 ml   |
| <b>Concentration</b>       | 0.53 mg/ml   |
| <b>Storage</b>             | Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles. |
| <b>Clonality</b>           | Polyclonal   |
| <b>Preservative</b>        | 0.05% Sodium Azide   |
| <b>Isotype</b>             | IgG  |
| <b>Purity</b>              | Immunogen affinity purified  |
| <b>Buffer</b>              | PBS and 30% Glycerol   |

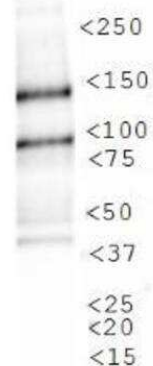
| <b>Product Description</b> |   |
|----------------------------|---|
| <b>Description</b>         | Novus Biologicals Rabbit Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody - BSA Free (NBP1-49601) is a polyclonal antibody validated for use in IHC, WB and ICC/IF. Anti-Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody: Cited in 2 publications. All Novus Biologicals antibodies are covered by our 100% guarantee. |
| <b>Host</b>                | Rabbit  |
| <b>Gene ID</b>             | 55818   |
| <b>Gene Symbol</b>         | KDM3A   |
| <b>Species</b>             | Human, Mouse, Rat, Primate  |
| <b>Reactivity Notes</b>    | Rat reactivity reported in scientific literature (PMID: 27807143).  |
| <b>Immunogen</b>           | A genomic peptide made to an internal region of the human JMJD1A protein (within residues 250-400). [Swiss-Prot Q9Y4C1]   |
| <b>Notes</b>               | Manufactured by Genomic Antibody Technology™. GAT <a href="#">FAQs</a>  |

| <b>Product Application Details</b> |  |
|------------------------------------|--|
| <b>Applications</b>                | Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry  |
| <b>Recommended Dilutions</b>       | Western Blot 1:5000, Immunohistochemistry 1:50, Immunocytochemistry/Immunofluorescence 1:500-1:2000, Immunohistochemistry-Paraffin 1:50  |
| <b>Application Notes</b>           | This JMJD1A antibody is useful for immunohistochemistry on paraffin tissues, immunocytochemistry/immunofluorescence and Western blot where a band is seen ~147 kDa. In ICC/IF, nuclear signal was observed in MCF-7 cells. Prior to immunostaining paraffin tissues, antigen retrieval with sodium citrate buffer (pH 6.0) is recommended. |



## Images

Western Blot: Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody [NBP1-49601] - Analysis of JMJD1A in Cos7 CoCl<sub>2</sub> treated lysate.



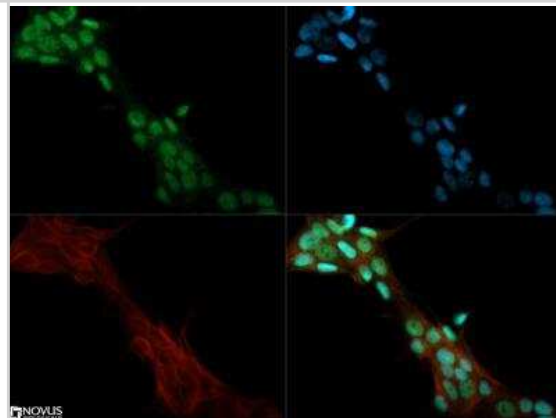
Immunocytochemistry/Immunofluorescence: Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody [NBP1-49601] - Antibody was tested at 1:50 in HeLa cells with FITC (green). Nuclei (Blue) were counterstained with DAPI (blue).



Immunohistochemistry-Paraffin: Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody [NBP1-49601] - Staining of JMJD1A in paraffin embedded mouse brain.



Immunocytochemistry/Immunofluorescence: Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody [NBP1-49601] - JMJD1A antibody was tested in MCF-7 cells with Dylight 488 (green). Nuclei and alpha-tubulin were counterstained with DAPI (blue) and Dylight 550 (red).



## Publications

Hanf A Crosstalk between redox regulatory pathways and epigenetic processes in tissue and cell culture models of cardiovascular complications Thesis

Chakraborty D, Cui W, Rosario GX et al. HIF-KDM3A-MMP12 regulatory circuit ensures trophoblast plasticity and placental adaptations to hypoxia. PNAS 2016-11-02 [PMID: 27807143] (WB, Rat)

Kuroki S, Matoba S, Akiyoshi M et al. Epigenetic Regulation of Mouse Sex Determination by the Histone Demethylase Jmjd1a. Science. 2013-09-06 [PMID: 24009392]



## Procedures

### Western Blot protocol for JMJD1A Antibody (NBP1-49601)

Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody:

Western Blot Protocol

1. Perform SDS-PAGE on samples to be analyzed, loading 40 ug of total protein per lane.
2. Transfer proteins to membrane according to the instructions provided by the manufacturer of the membrane and transfer apparatus.
3. Stain according to standard Ponceau S procedure (or similar product) to assess transfer success, and mark molecular weight standards where appropriate.
4. Rinse the blot.
5. Block the membrane using standard blocking buffer for at least 1 hour.
6. Wash the membrane in wash buffer three times for 10 minutes each.
7. Dilute the rabbit anti-JMJD1A primary antibody (NBP1-49601) in blocking buffer and incubate 1 hour at room temperature.
8. Wash the membrane in wash buffer three times for 10 minutes each.
9. Apply diluted rabbit-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturers instructions) and incubate 1 hour at room temperature.
10. Wash the blot in wash buffer three times for 10 minutes each (this step can be repeated as required to reduce background).
11. Apply the detection reagent of choice in accordance with the manufacturers instructions.

\*Note: Tween-20 can be added to the blocking or antibody dilution buffer at a final concentration of 0.05-0.2%.

### Immunohistochemistry-Paraffin protocol for JMJD1A Antibody (NBP1-49601)

Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody:

Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:

Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes.

Staining:

1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in wash buffer for 5 minutes.
3. Block each section with 100-400 ul blocking solution for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul biotinylated diluted secondary antibody. Incubate 30 minutes at room temperature.
7. Remove secondary antibody solution and wash sections three times with wash buffer for 5 minutes each.
8. Add 100-400 ul Streptavidin-HRP reagent to each section and incubate for 30 minutes at room temperature.
9. Wash sections three times in wash buffer for 5 minutes each.
10. Add 100-400 ul DAB substrate to each section and monitor staining closely.
11. As soon as the sections develop, immerse slides in deionized water.
12. Counterstain sections in hematoxylin.
13. Wash sections in deionized water two times for 5 minutes each.
14. Dehydrate sections.
15. Mount coverslips.

**Immunocytochemistry/Immunofluorescence Protocol for JMJD1A Antibody (NBP1-49601)**

Lysine (K)-specific Demethylase 3A/KDM3A/JMJD1A Antibody:

Immunocytochemistry Protocol

Culture cells to appropriate density in 35 mm culture dishes or 6-well plates.

1. Remove culture medium and add 10% formalin to the dish. Fix at room temperature for 30 minutes.
2. Remove the formalin and add ice cold methanol. Incubate for 5-10 minutes.
3. Remove methanol and add washing solution (i.e. PBS). Be sure to not let the specimen dry out. Wash three times for 10 minutes.
4. To block nonspecific antibody binding incubate in 10% normal goat serum from 1 hour to overnight at room temperature.
5. Add primary antibody at appropriate dilution and incubate at room temperature from 2 hours to overnight at room temperature.
6. Remove primary antibody and replace with washing solution. Wash three times for 10 minutes.
7. Add secondary antibody at appropriate dilution. Incubate for 1 hour at room temperature.
8. Remove antibody and replace with wash solution, then wash for 10 minutes. Add Hoechst 33258 to wash solution at 1:25,000 and incubate for 10 minutes. Wash a third time for 10 minutes.
9. Cells can be viewed directly after washing. The plates can also be stored in PBS containing Azide covered in Parafilm (TM). Cells can also be cover-slipped using Fluoromount, with appropriate sealing.

\*The above information is only intended as a guide. The researcher should determine what protocol best meets their needs. Please follow safe laboratory procedures.





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### **Products Related to NBP1-49601**

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|             |   |
|-------------|---|
| NB800-PC26  | COS-7 Nuclear Hypoxic Induced Cell Lysate           |
| NBP2-33376H | Blue Marker Antibody (6F4-F6) [HRP]                 |
| HAF008      | Goat anti-Rabbit IgG Secondary Antibody [HRP]       |
| NB7160      | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| NBP2-24891  | Rabbit IgG Isotype Control                          |

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### **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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