

**DESCRIPTION**

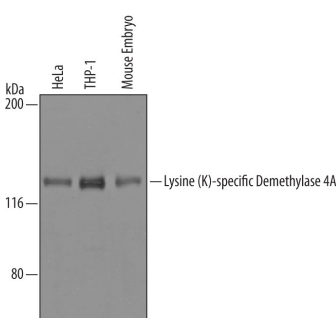
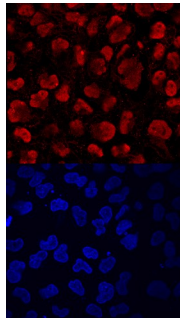
<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human KDM4A in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human KDM4C is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human KDM4A Lys386-Ser514 Accession # AAH02558
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

**DATA**

<p><b>Western Blot</b></p>  <p>Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, THP-1 human acute monocytic leukemia cell line, and mouse embryo tissue. PVDF Membrane was probed with 1 µg/mL of Human Lysine (K)-specific Demethylase 4A/KDM4A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6434) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Lysine (K)-specific Demethylase 4A/KDM4A at approximately 120 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>KDM4A in BG01V Human Cell Line.</b> KDM4A was detected in immersion fixed endoderm-differentiated BG01V human embryonic stem cells using Human/Mouse KDM4A Affinity-purified Polyclonal Antibody (Catalog # AF6434) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red, upper panel; Catalog # NL010) and counterstained with DAPI (blue, lower panel). Specific staining was localized to nuclei. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**BACKGROUND**

KDM4A (Lysine [K]-specific demethylase 4A; also known as JMJD2A) is a 155-160 kDa member of the JHDM3 histone demethylase family of enzymes. It is ubiquitously expressed and interacts with the histone deacetylase proteins HDAC-1, -2, and -3. KDM4A specifically demethylates trimethylated lysines on histone H3 at Lys9 and Lys36. Transcriptional repression occurs when it interacts with NCOR1. Human KDM4A is 1064 amino acids (aa) in length (SwissProt #:O75164). It contains one jumonji N domain (aa 13-55), a catalytic jumonji C domain (aa 175-291), two PHD zinc finger regions (aa 709-855), and two TUDOR methylated-histone binding domains (aa 897-1011). Over aa 386-514, human KDM4A shares 93% amino acid sequence identity with mouse KDM4A.