

# KDM1A Rabbit mAb

Catalog # AP75650

## Product Information

Application	WB, IP, ICC
Primary Accession	<a href="#">O60341</a>
Reactivity	Human, Rat, Hamster
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	92903

## Additional Information

Gene ID	23028
Other Names	KDM1A
Dilution	WB~~1/500-1/1000 IP~~1/20 ICC~~N/A
Format	Liquid

## Protein Information

Name	KDM1A ( <a href="#">HGNC:29079</a> )
Function	<p>Histone demethylase that can demethylate both 'Lys-4' (H3K4me) and 'Lys-9' (H3K9me) of histone H3, thereby acting as a coactivator or a corepressor, depending on the context (PubMed:<a href="#">15620353</a>, PubMed:<a href="#">15811342</a>, PubMed:<a href="#">16079794</a>, PubMed:<a href="#">16079795</a>, PubMed:<a href="#">16140033</a>, PubMed:<a href="#">16223729</a>, PubMed:<a href="#">27292636</a>). Acts by oxidizing the substrate by FAD to generate the corresponding imine that is subsequently hydrolyzed (PubMed:<a href="#">15620353</a>, PubMed:<a href="#">15811342</a>, PubMed:<a href="#">16079794</a>, PubMed:<a href="#">21300290</a>). 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 (PubMed:<a href="#">15620353</a>, PubMed:<a href="#">20389281</a>, PubMed:<a href="#">21300290</a>, PubMed:<a href="#">23721412</a>). 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 (PubMed:<a href="#">16079794</a>, PubMed:<a href="#">16140033</a>, PubMed:<a href="#">16885027</a>, PubMed:<a href="#">21300290</a>, PubMed:<a href="#">23721412</a>). Also acts as a coactivator of androgen receptor (AR)-dependent transcription, by being recruited to AR target genes and mediating demethylation of H3K9me, a specific tag for epigenetic transcriptional repression. The presence of PRKCB in AR-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 (PubMed:<a href="#">16079795</a>). Demethylates</p>

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 (PubMed:[29691401](#)). Demethylates methylated 'Lys-42' and methylated 'Lys-117' of SOX2 (PubMed:[29358331](#)). 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 (PubMed:[16079794](#), PubMed:[16140033](#)). Facilitates epithelial-to-mesenchymal transition by acting as an effector of SNAI1-mediated transcription repression of epithelial markers E-cadherin/CDH1, CDN7 and KRT8 (PubMed:[20562920](#), PubMed:[27292636](#)). Required for the maintenance of the silenced state of the SNAI1 target genes E-cadherin/CDH1 and CDN7 (PubMed:[20389281](#)). Required for the repression of GIPR expression (PubMed:[34655521](#), PubMed:[34906447](#)).

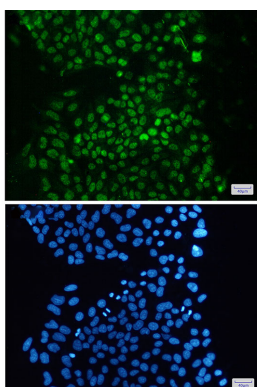
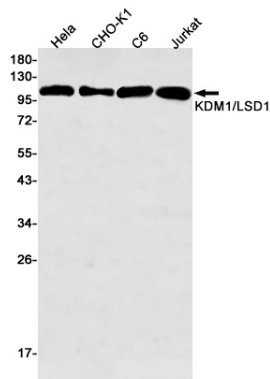
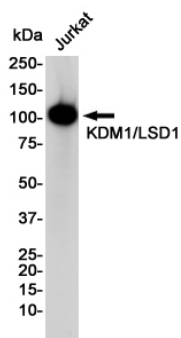
#### Cellular Location

Nucleus. Chromosome. Note=Associates with chromatin

#### Tissue Location

Ubiquitously expressed.

## Images



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