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KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus)

Rabbit Polyclonal Antibody

Catalog # ALS13772

Specification

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Product Information

Application	**IF, IHC**
Primary Accession	Q8N371
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**47kDa KDa**

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Additional Information

Gene ID 79831

Other Names
Lysine-specific demethylase 8, 1.14.11.27, JmjC domain-containing protein 5, Jumonji domain-containing protein 5, KDM8, JMJD5

Target/Specificity
Human JMJD5

Reconstitution & Storage
Short term 4°C, long term aliquot and store at -20°C, avoid freeze thaw cycles. Store undiluted.

Precautions
KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Protein Information

Name KDM8

Function
Bifunctional enzyme that acts both as an endopeptidase and 2- oxoglutarate-dependent monooxygenase (PubMed:28847961, PubMed:29459673, PubMed:28982940, PubMed:29563586). Endopeptidase that cleaves histones N-terminal tails at the carboxyl side of methylated arginine or lysine residues, to generate 'tailless nucleosomes', which may trigger transcription elongation (PubMed:28847961, PubMed:29459673, PubMed:28982940). Preferentially recognizes and cleaves monomethylated and dimethylated arginine residues of histones H2, H3

and H4. After initial cleavage, continues to digest histones tails via its aminopeptidase activity (PubMed:28847961, PubMed:29459673). Upon DNA damage, cleaves the N-terminal tail of histone H3 at monomethylated lysine residues, preferably at monomethylated 'Lys-9' (H3K9me1). The histone variant H3F3A is the major target for cleavage (PubMed:28982940). Additionally, acts as a Fe(2+) and 2-oxoglutarate- dependent monooxygenase, catalyzing (R)-stereospecific hydroxylation at C-3 of 'Arg-137' of RPS6 and 'Arg-141' of RCCD1, but the biological significance of this activity remains to be established (PubMed:29563586). Regulates mitosis through different mechanisms: Plays a role in transcriptional repression of satellite repeats, possibly by regulating H3K36 methylation levels in centromeric regions together with RCCD1. Possibly together with RCCD1, is involved in proper mitotic spindle organization and chromosome segregation (PubMed:24981860). Negatively regulates cell cycle repressor CDKN1A/p21, which controls G1/S phase transition (PubMed:24740926). Required for G2/M phase cell cycle progression. Regulates expression of CCNA1/cyclin-A1, leading to cancer cell proliferation (PubMed:20457893). Also, plays a role in regulating alpha-tubulin acetylation and cytoskeletal microtubule stability involved in epithelial to mesenchymal transition (PubMed:28455245). Regulates the circadian gene expression in the liver (By similarity). Represses the transcriptional activator activity of the CLOCK-BMAL1 heterodimer in a catalytically-independent manner (PubMed:30500822). Negatively regulates the protein stability and function of CRY1; required for AMPK-FBXL3-induced CRY1 degradation (PubMed:30500822).

Cellular Location
Nucleus. Chromosome Note=Colocalizes with trimethylated 'Lys-9' of histone H3 (H3K9me3)

Tissue Location
Weakly expressed in most cells. Highly expressed in breast cancer cells (PubMed:20457893). Expressed in embryonic stem cells (PubMed:24740926).

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Images

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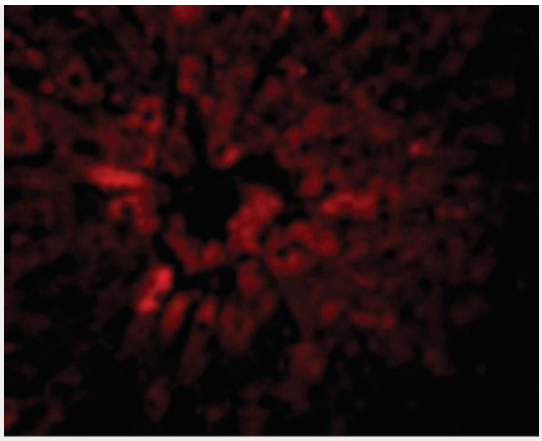
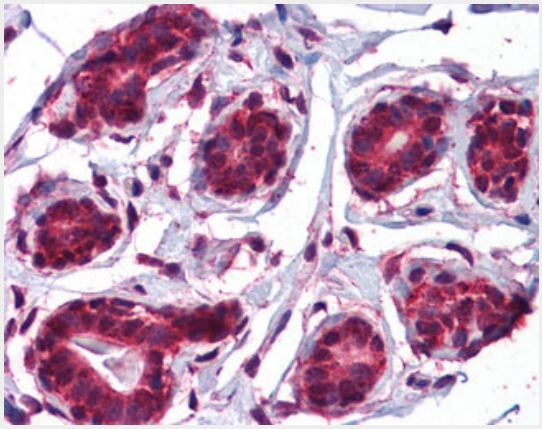


Immunofluorescence of JMJD5 in Rat Liver cells with JMJD5 antibody at 20 ug/ml.



Anti-JMJD5 antibody IHC of human breast.

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - Background

Histone demethylase required for G2/M phase cell cycle progression. Specifically demethylates dimethylated 'Lys-36' (H3K36me2) of histone H3, an epigenetic repressive mark, thereby acting as a transcription activator. Regulates expression of CCNA1 (cyclin-A1), leading to regulate cancer cell proliferation.

KDM8 / JMJD5 / FLJ13798 Antibody (C-Terminus) - References

Ota T.,et al.Nat. Genet. 36:40-45(2004).
Li H.,et al.Submitted (JUL-2003) to the EMBL/GenBank/DDBJ databases.
Martin J.,et al.Nature 432:988-994(2004).
Hsia D.A.,et al.Proc. Natl. Acad. Sci. U.S.A. 107:9671-9676(2010).