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JMJD5 Rabbit pAb

Catalog # AP97386

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q8N371
Other Accession	Q8N371
Reactivity	Human
Predicted	Rat, Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	47270
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human JMJD5
Epitope Specificity	344-416/416
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 JmjC domain.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	This gene likely encodes a histone lysine demethylase. Studies of a similar protein in mouse indicate a potential role for this protein as a tumor suppressor. Alternatively spliced transcript variants have been described.[provided by RefSeq, Feb 2009].

Additional Information

Gene ID	79831
Other Names	JMJD5; 3110005O21Rik; RGD1304823; KDM8_HUMAN; KDM8; JmjC domain-containing protein 5; Jumonji C domain-containing protein 5; L-arginine (3R)-hydroxylase KDM8; 1.14.11.73; 3.4.-.-; KDM8_MOUSE; Lysine-specific demethylase 8; KDM8_RAT; lysine demethylase 8; jumonji domain containing 5; lysine (K)-specific demethylase 8; JmjC arginyl-hydroxylase
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	KDM8
Function	Bifunctional enzyme that acts both as an endopeptidase and 2-oxoglutarate-dependent monooxygenase (PubMed:28847961, PubMed:28982940, PubMed:29459673, 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:28982940, PubMed:29459673). 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).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.