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JMJD7 Antibody

Catalog # ASC10974

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P0C870
Other Accession	P0C870, 205783894
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	35932
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	JMJD7 antibody can be used for detection of JMJD7 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	100137047
Other Names	JmjC domain-containing protein 7, Jumonji domain-containing protein 7, JMJD7
Target/Specificity	JMJD7;
Reconstitution & Storage	JMJD7 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	JMJD7 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	JMJD7 {ECO:0000303|PubMed:28847961, ECO:0000312|HGNC:HGNC:34397}
Function	Bifunctional enzyme that acts both as an endopeptidase and 2-oxoglutarate-dependent monooxygenase (PubMed:28847961, PubMed:29915238). 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). Preferentially recognizes and cleaves monomethylated and dimethylated arginine residues of histones H2, H3 and H4 (PubMed:28847961). After initial cleavage, continues to digest histones tails via its aminopeptidase activity (PubMed:28847961). Additionally, may play a

role in protein biosynthesis by modifying the translation machinery (PubMed:29915238). Acts as a Fe(2+) and 2- oxoglutarate-dependent monooxygenase, catalyzing (S)-stereospecific hydroxylation at C-3 of 'Lys-22' of DRG1 and 'Lys-21' of DRG2 translation factors (TRAFAC), promoting their interaction with ribonucleic acids (RNA) (PubMed:29915238).

Cellular Location Nucleus. Cytoplasm

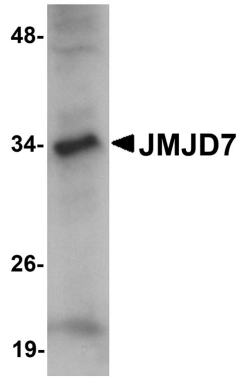
Background

JMJD7 Antibody: The jumonji domain-containing protein (JMJD) family is defined by the presence of the JmjC domain that is observed in several diverse species. While several JMJD proteins have been identified as being involved in chromatin regulation, histone demethylation and development, the function of JMJD7 has not been identified. JMJD7 was initially thought to be a novel splice form of the phospholipase PLA2G4B which is located downstream of JMJD7 as most tissues express a read-through transcript of the two genes.

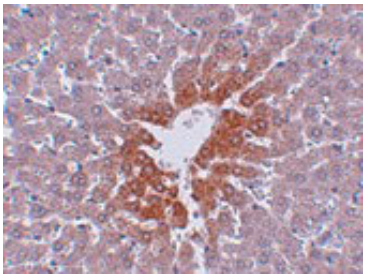
References

Takeuchi T, Watanabe Y, Takano-Shimizu T, et al. Roles of jumonji and jumonji family genes in chromatin regulation and development. Dev. Dyn.2006; 235:2449-59.
Clissold PM and Ponting CP. JmjC: cupin metalloenzyme-like domains in jumonji, hairless and phospholipase A2beta. Trends Biochem.Sci. 2001; 26:7-9.

Images

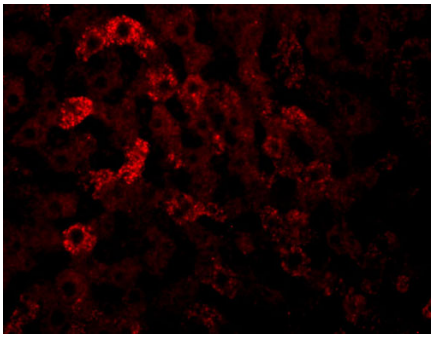


Western blot analysis of JMJD7 in 3T3 cell lysate with JMJD7 antibody at 1 µg/mL.



Immunohistochemistry of JMJD7 in rat liver tissue with JMJD7 antibody at 2.5 µg/mL.

Immunofluorescence of JMJD7 in rat liver tissue with JMJD7 antibody at 20 µg/mL.



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