



THE POLYCLONAL ANTIBODY SPECIALISTS

ANTIBODIES TO JUMONJI PROTEINS

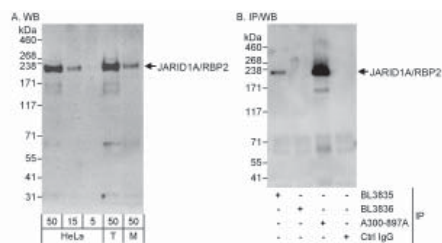
Accumulating evidence suggests that aberrant regulation of chromatin modification is important to tumorigenesis. Chromatin can be modified via histone methylation which is the posttranslational modification of histone amino acids by addition of methyl groups to regulate chromatin structure, transcription, and cellular epigenetic status. The jumonji (jmi) domain containing gene family of proteins has been discovered to play a role in chromatin modification and regulation by influencing transcriptional activation, suppression, and demethylation. Some recently characterized members of the jmi family of histone demethylases include JARID1A/

RBP2, JARID1C, JMJD1A, JMJD1B, JMJD1C, JMJD2A, JMJD2C and JMJD2D. Two members of this protein family, JARID1A/RBP2 and JMJD2A, have been found to bind the tumor suppressor protein pRb further strengthening the role of these proteins in transcriptional regulation. Additionally, JMJD2C, also known as GAS1 (gene amplified in squamous cell carcinoma), has been found to be amplified in several esophageal squamous carcinomas and inhibition of JMJD2C/GAS1 expression results in decreased cellular proliferation. Therefore, histone demethylases can be viewed as an up and coming target of research for anti-cancer therapies.

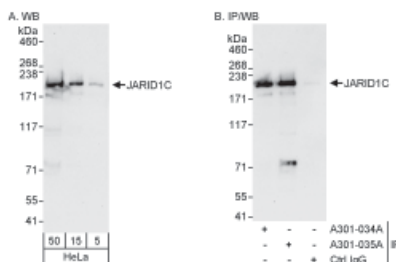
BETHYL LABORATORIES' CURRENT PORTFOLIO OF JUMONJI ANTIBODIES

Antibody	Applications		
	WB	IHC	IP
JARID1A	✓		✓
JARID1C	✓		✓
JMJD1B	✓	✓	✓
JMJD1C	✓	✓	
JMJD2A	✓	✓	✓
JMJD2C	✓		

WESTERN BLOT



Detection of Human and Mouse JARID1A/RBP2 by WB (h&m) and Immunoprecipitation (h). **Samples:** Whole cell lysate from HeLa (5, 15 and 50 mcg for WB; 1 mg for IP, 20% of IP loaded), 293T (T; 50 mcg), and mouse NIH3T3 (M; 50 mcg) cells. **Antibodies:** Affinity purified rabbit anti-JARID1A/RBP2 antibody A300-897A used for WB at 0.04 mcg/ml (A) and 1 mcg/ml (B) and used for IP at 3 mcg/mg lysate (B). JARID1A/RBP2 was also immunoprecipitated by rabbit anti-JARID1A/RBP2 antibody BL3835, which recognizes an upstream epitope. For blotting immunoprecipitated JARID1A/RBP2, ReliaBLOT® Reagents and Procedures (Cat. No. WB120) were used. **Detection:** Chemiluminescence with exposure times of 3 minutes (A) and 10 seconds (B).



Detection of Human JARID1C by Western Blot and Immunoprecipitation. **Samples:** Whole cell lysate (5, 15 and 50 mcg for WB; 1 mg for IP, 20% of IP loaded) from HeLa cells. **Antibodies:** Affinity purified rabbit anti-JARID1C antibody A301-035A used for WB at 0.04 mcg/ml (A) and 0.1 mcg/ml (B) and used for IP at 3 mcg/mg lysate. JARID1C was also immunoprecipitated by rabbit anti-JARID1C antibody A301-034A, which recognizes an upstream epitope. For blotting immunoprecipitated JARID1C, ReliaBLOT® Reagents and Procedures (Cat. No. WB120) were used. **Detection:** Chemiluminescence with exposure times of 30 seconds (A and B).

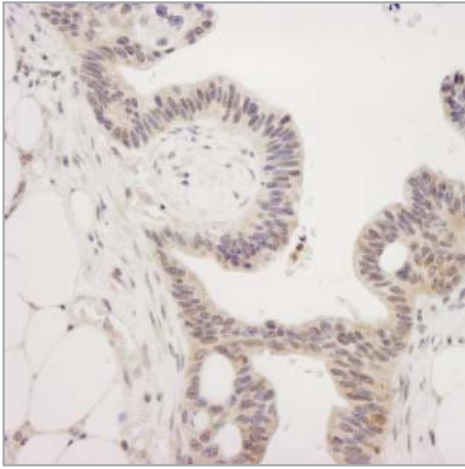
WB Western Blot, IHC Immunohistochemistry, IP Immunoprecipitation

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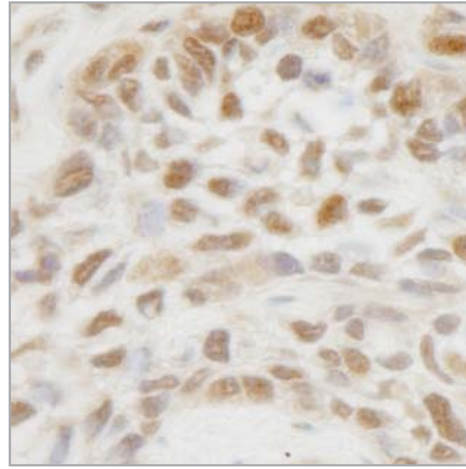
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IMMUNOHISTOCHEMISTRY



Detection of Human JMJD2A by Immunohistochemistry.
Sample: FFPE section of human ovarian tumor. **Antibody:** Affinity purified rabbit anti-JMJD2A (Cat. No. IHC-00188) used at a dilution of 1:250. **Detection:** DAB staining using Immunohistochemistry Accessory Kit (Cat. No. IHC-101).



Detection of Human JMJD1C by Immunohistochemistry.
Sample: FFPE section of human laryngeal squamous cell carcinoma. **Antibody:** Affinity purified rabbit anti-JMJD1C (Cat. No. IHC-00190) used at a dilution of 1:100. **Detection:** DAB staining using Immunohistochemistry Accessory Kit (Cat. No. IHC-101).