



# JARID1B (Jumonji/ARID Domain-containing Protein 1B)

## Catalog number

J7876-11

## Supplier

United States Biological

The methylation state of lysine residues in histone proteins is a major determinant for formation of active and inactive regions of the genome and is crucial for proper programming of the genome during development (1,2). Jumonji C (JmjC) domain-containing proteins represent the largest class of potential histone demethylase proteins (3). The JmjC domain can catalyze the demethylation of mono-, di-, and tri-methyl lysine residues via an oxidative reaction that requires iron and alpha-ketoglutarate (3). Based on homology, both humans and mice contain at least 30 such proteins, which can be divided into 7 separate families (3). The JARID (Jumonji/AT-rich interactive domain-containing protein) family contains four members: JARID1A (also RBP2 and RBBP2), JARID1B (also PLU-1), JARID1C (also SMCX) and JARID1D (also SMCY) (4). In addition to the JmjC domain, these proteins contain JmJN, BRIGHT, C5HC2 zinc-finger, and PHD domains, the latter of which binds to methylated histone H3 (Lys9) (4).

**All four JARID proteins demethylate di- and tri-methyl histone H3 Lys4; JARID1B also demethylates mono-methyl histone H3 Lys4 (5-7). JARID1A is a critical RB-interacting protein and is required for Polycomb- Repressive Complex 2 (PRC2)-mediated transcriptional repression during ES cell differentiation (8). A JARID1A-NUP98 gene fusion is associated with myeloid leukemia (9). JARID1B, which interacts with many proteins including c-Myc and HDAC4, may play a role in cell fate decisions by blocking terminal differentiation (10-12). JARID1B is over-expressed in many breast cancers and may act by repressing multiple tumor suppressor genes including BRCA1 and HOXA5 (13,14). JARID1C has been found in a complex with HDAC1, HDAC2, G9a and REST, which binds to and represses REST target genes in non-neuronal cells (7). JARID1C mutations are associated with X-linked mental retardation and epilepsy (15,16). JARID1D is largely uncharacterized.**

## Applications

Suitable for use in Western Blot and Immunoprecipitation. Other applications have not been tested.

## Recommended Dilutions

Western Blot: 1:1000

Immunoprecipitation: 1:25

Optimal dilutions to be determined by the researcher.

## Storage and Stability

May be stored at 4°C for short-term only. For long-term storage, aliquot and store at -20°C. Aliquots are stable for 12 months at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

## Immunogen

Synthetic peptide corresponding to the human JARID1B protein.

## Formulation



Supplied as a liquid in 10mM sodium HEPES, pH 7.5, 150mM sodium chloride, 0.1mg/ml BSA, 50% glycerol

### **Purity**

Purified by Protein A and peptide affinity chromatography.

### **Specificity**

Recognizes endogenous levels of human JARID1B protein. Does not cross-react with other JARID proteins, including JARID1A, JARID1C and JARID1D. Species Crossreactivity: monkey.

### **Product Type**

Pab

### **Source**

human

### **Isotype**

IgG

### **Grade**

Affinity Purified

### **Applications**

IP WB

### **Crossreactivity**

Hu Mk

### **Storage**

-20°C

### **MW**

180

### **Reference**

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