

**BRD3 Antibody**  
**Rabbit Polyclonal Antibody**  
**Catalog # ABV11179****Specification**

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**BRD3 Antibody - Product Information**

Application	WB
Primary Accession	<a href="#">Q15059</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	79542

**BRD3 Antibody - Additional Information****Gene ID** 8019

Positive Control	Western blot: 3T3 cell lysate
Application & Usage	Western blot: 1:200

**Other Names**

Bromodomain containing 3, isoform CRA\_b, ORFX; RING3L; Bromodomain containing protein 3; RING3-like protein

**Target/Specificity**

BRD3

**Antibody Form**

Liquid

**Appearance**

Colorless liquid

**Formulation**

100 µg (0.5 mg/ml) of antibody in PBS, 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol, pH 7.2

**Handling**

The antibody solution should be gently mixed before use.

**Reconstitution & Storage**

-20 °C

**Background Descriptions****Precautions**

BRD3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**BRD3 Antibody - Protein Information**

**Name** BRD3 {ECO:0000303|PubMed:18406326, ECO:0000312|HGNC:HGNC:1104}

### Function

Chromatin reader that recognizes and binds acetylated histones, thereby controlling gene expression and remodeling chromatin structures (PubMed:<a href="http://www.uniprot.org/citations/18406326" target="\_blank">18406326</a>, PubMed:<a href="http://www.uniprot.org/citations/32895492" target="\_blank">32895492</a>, PubMed:<a href="http://www.uniprot.org/citations/22464331" target="\_blank">22464331</a>, PubMed:<a href="http://www.uniprot.org/citations/27105114" target="\_blank">27105114</a>). Recruits transcription factors and coactivators to target gene sites, and activates RNA polymerase II machinery for transcriptional elongation (PubMed:<a href="http://www.uniprot.org/citations/32895492" target="\_blank">32895492</a>, PubMed:<a href="http://www.uniprot.org/citations/29567837" target="\_blank">29567837</a>). In vitro, binds acetylated lysine residues on the N-terminus of histone H2A, H2B, H3 and H4 (PubMed:<a href="http://www.uniprot.org/citations/18406326" target="\_blank">18406326</a>). Involved in endoderm differentiation via its association with long non-coding RNA (lncRNA) DIGIT: BRD3 undergoes liquid-liquid phase separation upon binding to lncRNA DIGIT, promoting binding to histone H3 acetylated at 'Lys-18' (H3K18ac) to induce endoderm gene expression (PubMed:<a href="http://www.uniprot.org/citations/32895492" target="\_blank">32895492</a>). Also binds non-histones acetylated proteins, such as GATA1 and GATA2: regulates transcription by promoting the binding of the transcription factor GATA1 to its targets (By similarity).

### Cellular Location

Nucleus. Chromosome. Note=Detected on chromatin

### Tissue Location

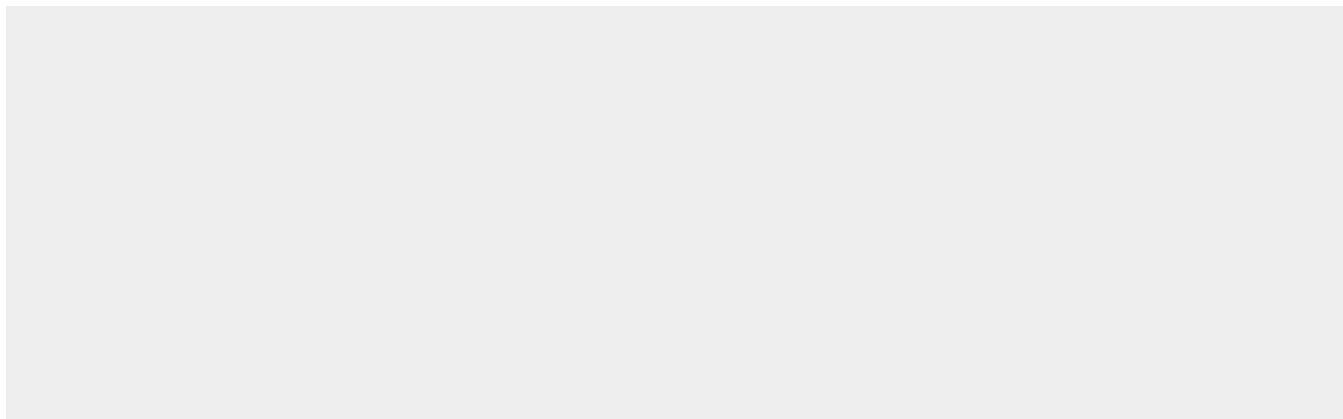
Ubiquitous..

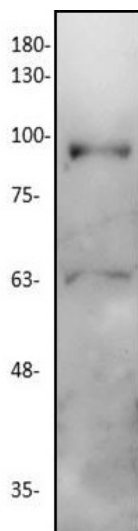
### BRD3 Antibody - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### BRD3 Antibody - Images





Western blot of 3T3 cell lysate with BRD3 antibody

### **BRD3 Antibody - Background**

The acetylation of histone lysine residues plays a crucial role in the epigenetic regulation of gene transcription. A bromodomain is a protein domain that recognizes acetylated lysine residues such as those on the N-terminal tails of histones. This recognition is often a prerequisite for protein-histone association and chromatin remodeling. These domains function in the linking of protein complexes to acetylated nucleosomes, thereby controlling chromatin structure and gene expression. Thus, bromodomains serve as “readers” of histone acetylation marks regulating the transcription of target promoters. The BET family of proteins, defined by tandem Bromodomains and an Extra Terminal domain, include BRD2, BRD3, BRD4, and BRDT. The BET proteins play a key role in many cellular processes, including inflammatory gene expression, mitosis, and viral/host interactions. The isolated individual or tandem bromodomains of BRD3 have been shown to bind acetylated histone tails, serving to couple histone acetylation marks to the transcriptional regulation of target promoters. Small molecule inhibitors of these interactions hold promise as useful therapeutics for human disease.