

**BRD4 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP8051a****Specification**

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**BRD4 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [O60885](#)**BRD4 Antibody (N-term) Blocking Peptide - Additional Information****Gene ID** 23476**Other Names**

Bromodomain-containing protein 4, Protein HUNK1, BRD4, HUNK1

**Target/Specificity**

The synthetic peptide sequence used to generate the antibody [AP8051a](/product/products/AP8051a) was selected from the N-term region of human BRD4. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

**Format**

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

**Storage**

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

**Precautions**

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

**BRD4 Antibody (N-term) Blocking Peptide - Protein Information****Name** BRD4**Synonyms** HUNK1**Function**

Chromatin reader protein that recognizes and binds acetylated histones and plays a key role in transmission of epigenetic memory across cell divisions and transcription regulation (PubMed: [23086925](http://www.uniprot.org/citations/23086925), PubMed: [23317504](http://www.uniprot.org/citations/23317504), PubMed: [20871596](http://www.uniprot.org/citations/20871596), PubMed: [29176719](http://www.uniprot.org/citations/29176719)). Remains associated with acetylated chromatin throughout the entire cell cycle and provides epigenetic memory for postmitotic G1 gene transcription by preserving acetylated chromatin status and maintaining high-order chromatin structure (PubMed: [23589332](http://www.uniprot.org/citations/23589332), PubMed: [23589332](#)).

<http://www.uniprot.org/citations/23317504> target="\_blank">23317504</a>, PubMed:<a href="http://www.uniprot.org/citations/22334664" target="\_blank">22334664</a>). During interphase, plays a key role in regulating the transcription of signal- inducible genes by associating with the P-TEFb complex and recruiting it to promoters (PubMed:<a href="http://www.uniprot.org/citations/23589332" target="\_blank">23589332</a>, PubMed:<a href="http://www.uniprot.org/citations/19596240" target="\_blank">19596240</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/24360279" target="\_blank">24360279</a>). Also recruits P-TEFb complex to distal enhancers, so called anti-pause enhancers in collaboration with JMJD6 (PubMed:<a href="http://www.uniprot.org/citations/23589332" target="\_blank">23589332</a>, PubMed:<a href="http://www.uniprot.org/citations/19596240" target="\_blank">19596240</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/24360279" target="\_blank">24360279</a>). BRD4 and JMJD6 are required to form the transcriptionally active P-TEFb complex by displacing negative regulators such as HEXIM1 and 7SKsnRNA complex from P-TEFb, thereby transforming it into an active form that can then phosphorylate the C- terminal domain (CTD) of RNA polymerase II (PubMed:<a href="http://www.uniprot.org/citations/23589332" target="\_blank">23589332</a>, PubMed:<a href="http://www.uniprot.org/citations/19596240" target="\_blank">19596240</a>, PubMed:<a href="http://www.uniprot.org/citations/16109377" target="\_blank">16109377</a>, PubMed:<a href="http://www.uniprot.org/citations/16109376" target="\_blank">16109376</a>, PubMed:<a href="http://www.uniprot.org/citations/24360279" target="\_blank">24360279</a>). Regulates differentiation of naive CD4(+) T-cells into T-helper Th17 by promoting recruitment of P-TEFb to promoters (By similarity). Promotes phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II (PubMed:<a href="http://www.uniprot.org/citations/23086925" target="\_blank">23086925</a>). According to a report, directly acts as an atypical protein kinase and mediates phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II; these data however need additional evidences in vivo (PubMed:<a href="http://www.uniprot.org/citations/22509028" target="\_blank">22509028</a>). In addition to acetylated histones, also recognizes and binds acetylated RELA, leading to further recruitment of the P-TEFb complex and subsequent activation of NF-kappa-B (PubMed:<a href="http://www.uniprot.org/citations/19103749" target="\_blank">19103749</a>). Also acts as a regulator of p53/TP53- mediated transcription: following phosphorylation by CK2, recruited to p53/TP53 specific target promoters (PubMed:<a href="http://www.uniprot.org/citations/23317504" target="\_blank">23317504</a>).

### Cellular Location

Nucleus. Chromosome. Note=Associates with acetylated chromatin (PubMed:21890894, PubMed:16109376). Released from chromatin upon deacetylation of histones that can be triggered by different signals such as activation of the JNK pathway or nocodazole treatment (PubMed:21890894, PubMed:16109376). Preferentially localizes to mitotic chromosomes, while it does not localize to meiotic chromosomes (PubMed:21890894, PubMed:16109376).

### Tissue Location

Ubiquitously expressed.

## BRD4 Antibody (N-term) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

## BRD4 Antibody (N-term) Blocking Peptide - Images

## BRD4 Antibody (N-term) Blocking Peptide - Background

BRD4 is homologous to the murine protein MCAP, which associates with chromosomes during mitosis, and to the human RING3 protein, a serine/threonine kinase. Each of these proteins contains two bromodomains, a conserved sequence motif which may be involved in chromatin targeting. The gene has been implicated as the chromosome 19 target of translocation t(15;19)(q13;p13.1), which defines an upper respiratory tract carcinoma in young people.

#### **BRD4 Antibody (N-term) Blocking Peptide - References**

Maruyama, T., et al., Mol. Cell. Biol. 22(18):6509-6520 (2002). French, C.A., et al., Am. J. Pathol. 159(6):1987-1992 (2001). Dey, A., et al., Mol. Cell. Biol. 20(17):6537-6549 (2000).