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BRD4 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8051b

Specification

BRD4 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession O60885

BRD4 Antibody (C-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 AP8051b was selected from the C-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 (C-term) Blocking Peptide - Protein Information

Name BRD4

Synonyms HUNK1

BRD4 Antibody (C-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 (C-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).

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. 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, PubMed:23317504, PubMed:22334664). 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. Also recruits P-TEFb complex to distal enhancers, so called anti-pause enhancers in collaboration with JMJD6. 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:23589332, PubMed:19596240, PubMed:16109377, PubMed:16109376, PubMed:24360279). Promotes phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II (PubMed:23086925). 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:22509028). 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:19103749). Also acts as a regulator of p53/TP53-mediated transcription: following phosphorylation by CK2, recruited to p53/TP53 specific target promoters (PubMed:23317504).

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 localizes to meiotic chromosomes (PubMed:21890894, PubMed:16109376).

Tissue Location
Ubiquitously expressed.

BRD4 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides