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BRD4 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP8051b

Specification

BRD4 Antibody (C-term) - Product Information

Application	**IHC-P,E**
Primary Accession	O60885
Other Accession	Q9ESU6
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**1313-1342**

BRD4 Antibody (C-term) - Additional Information

Gene ID 23476

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

Target/Specificity
This BRD4 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1313~1342 amino acids from the C-terminal region of human BRD4.

Dilution
IHC-P~~1:50~100

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
BRD4 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

BRD4 Antibody (C-term) - 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:20871596, PubMed:23086925, PubMed:23317504, PubMed:29176719, PubMed:29379197). 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:22334664, PubMed:23317504, PubMed:23589332). 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:16109376, PubMed:16109377, PubMed:19596240, PubMed:23589332, PubMed:24360279). Also recruits P-TEFb complex to distal enhancers, so called anti-pause enhancers in collaboration with JMJD6 (PubMed:16109376, PubMed:16109377, PubMed:19596240, PubMed:23589332, PubMed:24360279). 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:16109376, PubMed:16109377, PubMed:19596240, PubMed:23589332, PubMed:24360279). 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: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:16109376, PubMed:21890894). 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:16109376, PubMed:21890894). Preferentially localizes to mitotic chromosomes, while it does not localize to meiotic chromosomes (PubMed:16109376, PubMed:21890894).

Tissue Location
Ubiquitously expressed.

BRD4 Antibody (C-term) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BRD4 Antibody (C-term) - Images

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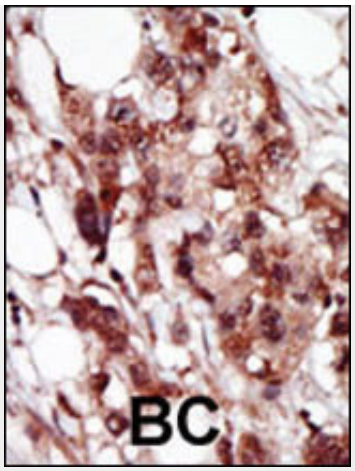
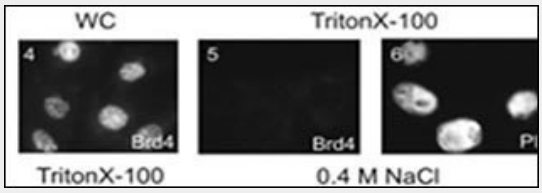


Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.



Subnuclear distribution of cellular proteins. CHOBgl40 cells grown on coverslips were either directly or after treatment with 0.5% Triton X-100, incubated with antibodies against Brd4 (images 4 and 5). PI, propidium iodide staining of cellular DNA (images 6).WC, whole cells.

BRD4 Antibody (C-term) - 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) - 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).

BRD4 Antibody (C-term) - Citations

- BRD4 regulates fructose-inducible lipid accumulation-related genes in the mouse liver.
- Amino acid substitutions that specifically impair the transcriptional activity of papillomavirus E2 affect binding to the long isoform of Brd4.
- Characterization of the functional activities of the bovine papillomavirus type 1 E2 protein single-chain heterodimers.
- Association of bovine papillomavirus E2 protein with nuclear structures in vivo.