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Brd4 Antibody

Rabbit mAb
Catalog # AP90450

Product Information

Application	WB, IHC, IF, ICC, IP, IHF
Primary Accession	O60885
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Other Names	Brd4; CAP; HUNK1; MCAP; Bromodomain containing 4; chromosome associated protein;
Isotype	Rabbit IgG
Host	Rabbit
Calculated MW	152219

Additional Information

Dilution	WB 1:500~1:2000 IHC 1:50~1:200 ICC/IF 1:50~1:200 IP 1:50
Purification	Affinity-chromatography
Immunogen	A synthesized peptide derived from human Brd4
Description	Bromodomain-containing protein 4 (BRD4) is a member of the bromodomains and extra terminal (BET) family of proteins, which also includes BRD2, BRD3, and BRDT. BET family proteins contain two tandem bromodomains and an extra terminal (ET) domain, and bind acetyl lysine residues. BRD4 is a chromatin-binding protein with a preference for Lys14 on histone H3 as well as Lys5 and Lys12 on histone H4. BRD4 chromatin binding occurs throughout the cell cycle, including condensed mitotic chromosomes, when the majority of genes are silenced.
Storage Condition and Buffer	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

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 evidence 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).

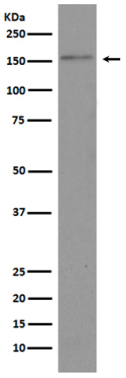
Cellular Location

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.

Images



Western blot analysis of Brd4 expression in HeLa cell lysate.

Image not found : 202311/AP90450-IHC.jpg

Immunohistochemical analysis of paraffin-embedded human kidney, using Brd4 Antibody.

Image not found : 202311/AP90450-IF.jpg

Immunofluorescent analysis of Hela cells, using Brd4 Antibody .

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