

## Rabbit BRD4 Polyclonal Antibody | anti-BRD4 antibody

BRD4

|                              |                       |                                        |                                                                                |
|------------------------------|-----------------------|----------------------------------------|--------------------------------------------------------------------------------|
| CATALOG #<br><b>AAA36925</b> | HOST<br><b>Rabbit</b> | REACTIVITY<br><b>Human, mouse, rat</b> | APPLICATIONS<br><b>Immunocytochemistry, Immunohistochemistry, Western Blot</b> |
|------------------------------|-----------------------|----------------------------------------|--------------------------------------------------------------------------------|

### PRODUCT SYNONYMS

BRD4; Polyclonal Antibody; anti-BRD4 antibody

### PRODUCT SPECIFICATIONS

|                                                |                                                                          |
|------------------------------------------------|--------------------------------------------------------------------------|
| Host                                           | Rabbit                                                                   |
| Reactivity                                     | Human, mouse, rat                                                        |
| Clonality                                      | Polyclonal                                                               |
| Isotype                                        | IgG                                                                      |
| Purity/Purification                            | Affinity Purification                                                    |
| Sequence Length                                | 722                                                                      |
| Applicable Applications for anti-BRD4 antibody | ICC (Immunocytochemistry), IHC (Immunohistochemistry), WB (Western Blot) |
| Buffer                                         | PBS with 0.02% sodium azide, 50% glycerol, pH7.3.                        |
| Preparation and Storage                        | Store at -20°C or -80°C. Avoid freeze / thaw cycles.                     |

### IMAGES



#### WB (Western Blot)

Western blot analysis of extracts of various cell lines, using BRD4 antibody at 1:1000 dilution. Secondary antibody: HRP Goat Anti-Rabbit IgG (H+L) at 1:10000 dilution. Lysates/proteins: 25ug per lane. Blocking buffer: 3% nonfat dry milk in TBST. Detection: ECL Basic Kit. Exposure time: 30s.

ADDITIONAL INFORMATION

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| Related Product Information for anti-BRD4 antibody | Bromodomain-containing protein 4 (BRD4) is a member of the bromodomains and extraterminal (BET) family of proteins, which also includes BRD2, BRD3, and BRDT (1-3). BET family proteins contain two tandem bromodomains and an extra terminal (ET) domain, and bind acetyl lysine residues (3). BRD4 is a chromatin-binding protein with a preference for Lys14 on histone H3 as well as Lys5 and Lys12 on histone H4 (4). BRD4 chromatin binding occurs throughout the cell cycle, including condensed mitotic chromosomes, when the majority of genes are silenced (5). BRD4 dissociation with chromatin during mitosis is thought to be an important part of the bookmarking mechanism to accelerate re-activation of the silenced genes upon exit from mitosis (2,6). BRD4 has been shown to facilitate transcription by recruiting the positive transcription elongation factor b (pTEFb) complex that phosphorylates Ser2 of the heptapeptide repeat of the C-terminal domain of RNA polymerase II, promoting transcription elongation (3,7,8). In addition, BRD4 has been found to be part of the super elongation complex and the polymerase associated factor complex (PAFc) in MLL-fusion derived leukemia cell lines, demonstrating a role for BRD4 in the regulation of transcription elongation (9). Research studies have shown that BRD4 (and BET family proteins) may be promising therapeutic targets for various Myc-driven cancers, such as Burkitt's lymphoma and certain acute myeloid leukemias (1,10,11). Investigators have found molecular inhibition of BET proteins to be effective in inducing apoptosis in various MLL-fusion driven leukemic cell lines by competing BRD3 and BRD4 from chromatin, leading to reduced expression of Bcl-2, Myc, and CDK6 (9). BET inhibition has also been shown to have antitumor activities against nuclear protein in testis (NUT) midline carcinoma cell lines and xenografts in mice where BRD4 is found to be a frequent translocation partner of the NUT protein (12). In addition, BRD4 regulates the expression of some inflammatory genes, and inhibition of BRD4 (and BET family proteins) chromatin binding causes reduced expression of a subset of inflammatory genes in macrophages, leading to protection against endotoxic shock and sepsis (13). |
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NCBI AND UNIPROT INFORMATION

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|----------------------------------|-------------------------------------------------------------------------------------------|
| NCBI GI #                        | 7657218                                                                                   |
| NCBI GeneID                      | 23476                                                                                     |
| NCBI Accession #                 | NP_055114.1                                                                               |
| NCBI GenBank Nucleotide #        | NM_014299.2                                                                               |
| UniProt Accession #              | O60885; O60433; Q4G0X8; Q86YS8; Q96PD3                                                    |
| Molecular Weight                 | 152kDa                                                                                    |
| NCBI Official Full Name          | bromodomain-containing protein 4 isoform short                                            |
| NCBI Official Synonym Full Names | bromodomain containing 4                                                                  |
| NCBI Official Symbol             | BRD4                                                                                      |
| NCBI Official Synonym Symbols    | CAP; MCAP; HUNK1; HUNKI                                                                   |
| NCBI Protein Information         | bromodomain-containing protein 4; bromodomain-containing 4; chromosome-associated protein |
| UniProt Protein Name             | Bromodomain-containing protein 4                                                          |
| UniProt Gene Name                | BRD4                                                                                      |
| UniProt Synonym Gene Names       | HUNK1                                                                                     |
| UniProt Entry Name               | BRD4_HUMAN                                                                                |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.