

## BRD2 antibody (pAb)

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**Catalog Nos:** 61797, 61798

**RRID:** AB\_2793770

**Application(s):** ChIP, ChIP-Seq, CUT&RUN

**Reactivity:** Human

**Volumes:** 100 µl, 10 µl

**Purification:** Affinity Purified

**Host:** Rabbit

**Isotype:** IgG

**Molecular Weight:** 110 kDa

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**Background:** BRD2 (Bromodomain-containing protein 2) belongs to the BET subclass of proteins, which are characterized by two N-terminal bromodomains and one ET (Extra Terminal) domain. BRDs associate with chromatin through their bromodomains that recognize acetylated histone lysine residues. Bromodomains function as 'readers' of these epigenetic histone marks and regulate chromatin structure and gene expression by linking associated proteins to the acetylated nucleosomal targets. The ET domain functions as a protein binding motif and exerts atypical serine-kinase activity. The BET family consists of at least four members in mouse and human, BRD2 (also referred to as FSRG1, RING3), BRD3 (FSRG2, ORFX), BRD4 (FSRG4, MCAP/HUNK1), and BRDT (FSRG3, BRD6). BRD proteins are related to the female Sterile Homeotic protein in *Drosophila*, a gene required maternally for proper expression of other homeotic genes, such as Ubx, which is involved in pattern formation. BRD2 causes elevated protein kinase activity in leukemias. Transgenic mice overexpressing BRD2 in the lymphoid system develop diffuse large-cell lymphoma. BRD2 has been shown to interact with E2F1 and with histone H4 acetylated at Lys12 via its two bromodomains. BRD2 may play a role in spermatogenesis or folliculogenesis. Genetic evidence links the BRD2 gene to both juvenile myoclonic epilepsy and photoparoxysmal responses.

**Immunogen:** This BRD2 antibody was raised against a recombinant protein comprising amino acids 58-232 of human BRD2 (NP\_005095).

**Buffer:** Purified IgG in PBS with 30% glycerol and 0.035% sodium azide. Sodium azide is highly toxic.

### Application Notes:

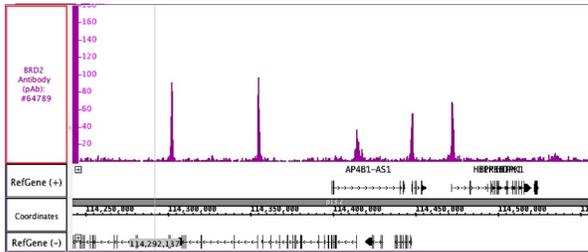
Applications Validated by Active Motif:

ChIP-Seq: 6 µl per ChIP

CUT&RUN: 1 µl per 50 µl reaction

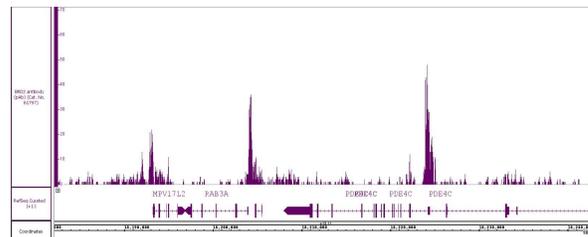
**Storage and Guarantee:** Some products may be shipped at room temperature. This will not affect their stability or performance. Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage. This product is guaranteed for 12 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



### ChIP-Seq of BRD2 antibody (pAb).

ChIP was performed using BRD2 polyclonal antibody with 30  $\mu$ g chromatin from the DHL4 cell line and 6  $\mu$ l of antibody. ChIP DNA was sequenced on the Illumina HiSeq and 16 million sequence tags were mapped to identify BRD2 binding sites. The image shows binding across a region of chromosome 1.



### BRD2 antibody (pAb) tested by CUT&RUN

CUT&RUN was performed using 500,000 K562 nuclei and sequenced using 38 base-pair, paired-end reads on the Illumina NovaSeq. Data was collected from 30 million reads, and BRD2 data is shown for Chromosome 19.