

Mouse Monoclonal Antibody to BRD2
Purified Mouse Monoclonal Antibody
Catalog # AO2482a**Specification**

Mouse Monoclonal Antibody to BRD2 - Product Information

Application	E, WB, FC
Primary Accession	P25440
Reactivity	Human, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse IgG2b
Calculated MW	88kDa KDa

Description

This gene encodes a transcriptional regulator that belongs to the BET (bromodomains and extra terminal domain) family of proteins. This protein associates with transcription complexes and with acetylated chromatin during mitosis, and it selectively binds to the acetylated lysine-12 residue of histone H4 via its two bromodomains. The gene maps to the major histocompatibility complex (MHC) class II region on chromosome 6p21.3, but sequence comparison suggests that the protein is not involved in the immune response. This gene has been implicated in juvenile myoclonic epilepsy, a common form of epilepsy that becomes apparent in adolescence. Multiple alternatively spliced variants have been described for this gene.;

Immunogen

Purified recombinant fragment of human BRD2 (AA: 227-364) expressed in E. Coli.

Formulation

Purified antibody in PBS with 0.05% sodium azide

Application Note

ELISA: 1/10000; WB: 1/500 - 1/2000; FCM: 1/200 - 1/400

Mouse Monoclonal Antibody to BRD2 - Additional Information

Gene ID 6046

Other Names

FSH; NAT; RNF3; FSRG1; RING3; D6S113E; O27.1.1

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Mouse Monoclonal Antibody to BRD2 is for research use only and not for use in diagnostic or therapeutic procedures.

Mouse Monoclonal Antibody to BRD2 - Protein Information

Name BRD2 {ECO:0000303|PubMed:16227282, ECO:0000312|HGNC:HGNC:1103}

Function

Chromatin reader protein that specifically recognizes and binds histone H4 acetylated at 'Lys-5' and 'Lys-12' (H4K5ac and H4K12ac, respectively), thereby controlling gene expression and remodeling chromatin structures (PubMed:18406326, PubMed:17848202, PubMed:17148447, PubMed:20709061, PubMed:20048151, PubMed:20871596). Recruits transcription factors and coactivators to target gene sites, and activates RNA polymerase II machinery for transcriptional elongation (PubMed:28262505). Plays a key role in genome compartmentalization via its association with CTCF and cohesin: recruited to chromatin by CTCF and promotes formation of topologically associating domains (TADs) via its ability to bind acetylated histones, contributing to CTCF boundary formation and enhancer insulation (PubMed:35410381). Also recognizes and binds acetylated non-histone proteins, such as STAT3 (PubMed:28262505). Involved in inflammatory response by regulating differentiation of naive CD4(+) T-cells into T- helper Th17: recognizes and binds STAT3 acetylated at 'Lys-87', promoting STAT3 recruitment to chromatin (PubMed:28262505). In addition to acetylated lysines, also recognizes and binds lysine residues on histones that are both methylated and acetylated on the same side chain to form N6-acetyl-N6-methyllysine (Kacme), an epigenetic mark of active chromatin associated with increased transcriptional initiation (PubMed:37731000). Specifically binds histone H4 acetyl-methylated at 'Lys-5' and 'Lys-12' (H4K5acme and H4K12acme, respectively) (PubMed:37731000).

Cellular Location

Nucleus. Chromosome Note=Detected on chromatin and nucleosomes

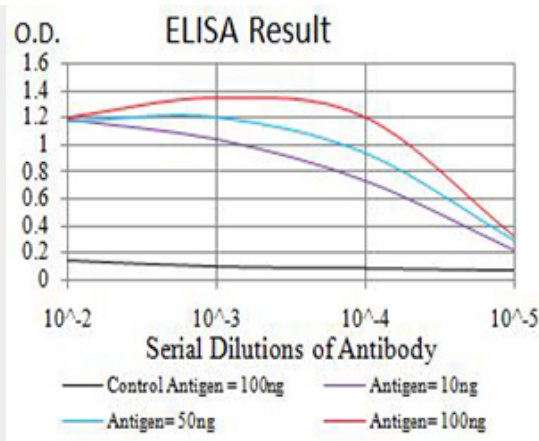
Mouse Monoclonal Antibody to BRD2 - Protocols

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

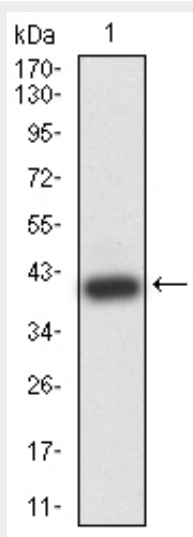
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Mouse Monoclonal Antibody to BRD2 - Images

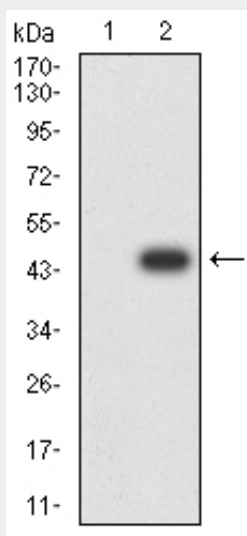




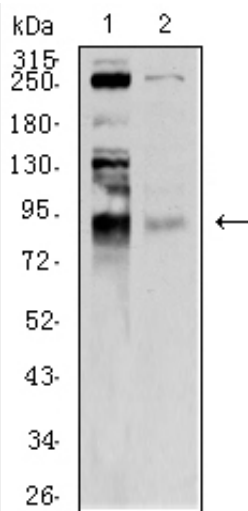
Black line: Control Antigen (100 ng); Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line: Antigen (100 ng)



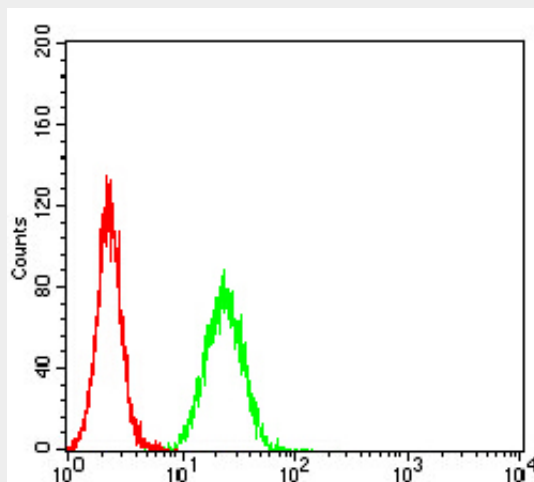
Western blot analysis using BRD2 mAb against human BRD2 (AA: 227-364) recombinant protein. (Expected MW is 40.6 kDa)



Western blot analysis using BRD2 mAb against HEK293 (1) and BRD2 (AA: 227-364)-hlgGfC transfected HEK293 (2) cell lysate.



Western blot analysis using BRD2 mouse mAb against C6 (1) and HeLa (2) cell lysate.



Flow cytometric analysis of HeLa cells using BRD2 mouse mAb (green) and negative control (red).

Mouse Monoclonal Antibody to BRD2 - References

1. Mol Biol Cell. 2013 Nov;24(22):3557-68. ; 2. J Biol Chem. 2010 Mar 5;285(10):7610-8.;