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Mouse Monoclonal Antibody to BRD2

Purified Mouse Monoclonal Antibody
Catalog # AO2481a

Product Information

Application	WB, E
Primary Accession	P25440
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1H6B12
Isotype	Mouse IgG1
Calculated MW	88061
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 histocompatability 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;

Additional Information

Gene ID	6046
Other Names	FSH; NAT; RNF3; FSRG1; RING3; D6S113E; O27.1.1
Dilution	WB~~1:1000 E~~N/A
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.

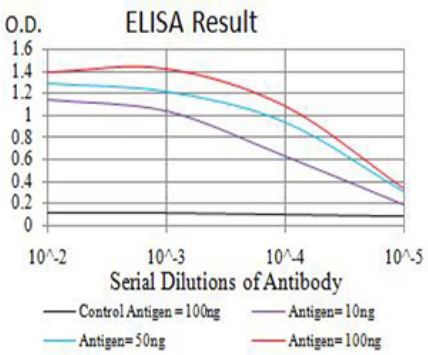
Protein Information

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:17148447, PubMed:17848202, PubMed:18406326, PubMed:20048151, PubMed:20709061, 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

References

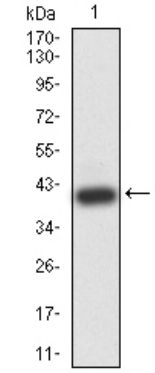
1.Mol Biol Cell. 2013 Nov;24(22):3557-68. ; 2.J Biol Chem. 2010 Mar 5;285(10):7610-8.;

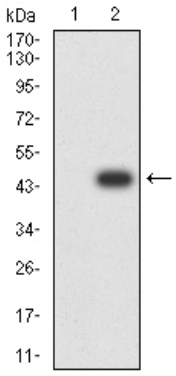
Images



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)-hIgGFc transfected HEK293 (2) cell lysate.