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BRD2 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP8049c

Specification

BRD2 Antibody (Center) Blocking Peptide - Product Information

Primary Accession P25440

BRD2 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 6046

Other Names
Bromodomain-containing protein 2, O2711, Really interesting new gene 3 protein, BRD2, KIAA9001, RING3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8049c was selected from the Center region of human BRD2 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

BRD2 Antibody (Center) Blocking Peptide - 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

BRD2 Antibody (Center) Blocking Peptide - Protocols

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

- Blocking Peptides

BRD2 Antibody (Center) Blocking Peptide - Images

BRD2 Antibody (Center) Blocking Peptide - Background

BRD2 is a mitogen-activated kinase which localizes to the nucleus. 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. Homology to the Drosophila gene female sterile homeotic suggests that this human protein may be part of a signal transduction pathway involved in growth control.

BRD2 Antibody (Center) Blocking Peptide - References

Pal, D.K., et al., Am. J. Hum. Genet. 73(2):261-270 (2003).Crowley, T.E., et al., Mol. Endocrinol. 16(8):1727-1737 (2002).Denis, G.V., et al., Cell Growth Differ. 11(8):417-424 (2000).Taniguchi, Y., et al., Genomics 51(1):114-123 (1998).Thorpe, K.L., et al., Immunogenetics 44(5):391-396 (1996).