

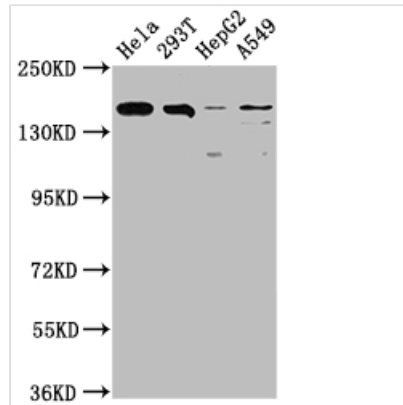


BRD4 Antibody

Product Code	CSB-RA152430A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O60885
Immunogen	A synthesized peptide derived from human Brd4
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200
Relevance	<p>Chromatin reader protein that recognizes and binds acetylated histones and plays a key role in transmission of epigenetic memory across cell divisions and transcription regulation. Remains associated with acetylated chromatin throughout the entire cell cycle and provides epigenetic memory for postmitotic G1 gene transcription by preserving acetylated chromatin status and maintaining high-order chromatin structure. During interphase, plays a key role in regulating the transcription of signal-inducible genes by associating with the P-TEFb complex and recruiting it to promoters: BRD4 is required to form the transcriptionally active P-TEFb complex by displacing negative regulators such as HEXIM1 and 7SKsnRNA complex from P-TEFb, thereby transforming it into an active form that can then phosphorylate the C-terminal domain (CTD) of RNA polymerase II. Promotes phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II. According to a report, directly acts as an atypical protein kinase and mediates phosphorylation of 'Ser-2' of the C-terminal domain (CTD) of RNA polymerase II; these data however need additional evidences in vivo (PubMed:22509028). In addition to acetylated histones, also recognizes and binds acetylated RELA, leading to further recruitment of the P-TEFb complex and subsequent activation of NF-kappa-B. Also acts as a regulator of p53/TP53-mediated transcription: following phosphorylation by CK2, recruited to p53/TP53 specific target promoters.</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cancer
Gene Names	BRD4
Accession NO.	1E5



Image



Western Blot

Positive WB detected in: HeLa whole cell lysate, 293T whole cell lysate, HepG2 whole cell lysate, A549 whole cell lysate

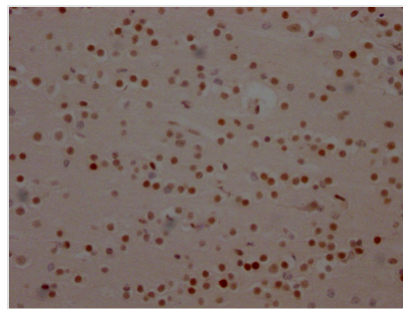
All lanes: BRD4 antibody at 1:1500

Secondary

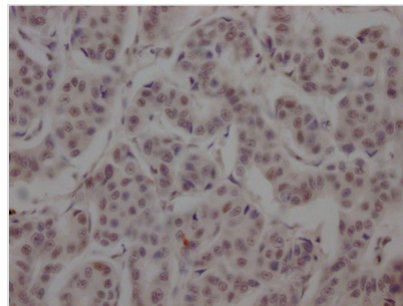
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 153, 81, 89 kDa

Observed band size: 153 kDa



IHC image of CSB-RA152430A0HU diluted at 1:100 and staining in paraffin-embedded human brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA152430A0HU diluted at 1:100 and staining in paraffin-embedded human breast cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The recombinant BRD4 antibody was prepared by obtaining the antibody genes, cloning the genes into a plasma vector to construct vector clone, transfecting the vector clone into a mammalian cell line for transient expression, and purifying the antibody by affinity-chromatography. This recombinant BRD4 antibody has been verified to detect the BRD4 protein from Human in the ELISA, WB, IHC.

BRD4 functions as an epigenetic reader, regulating gene expression by recruiting other transcription factors and controlling RNA polymerase II elongation directly. BRD4 plays a role in embryogenesis and stem cell development as an epigenetic regulator. In addition to transcriptional functions, BRD4 is involved in histone acetylation, DNA replication and repair regulation, telomere preservation, and protein kinase activity. BRD4 collaborates with other chromatin remodelers and transcription factors to determine stem cell fate and identity. BRD4 has been used in anti-cancer applications and has also been a



valid target in type I diabetes and heart failure from preclinical research.