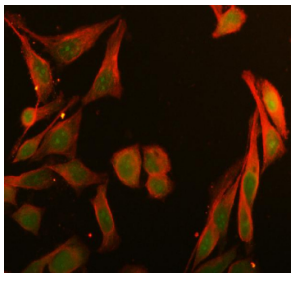
BRD1 Antibody / Bromodomain-containing protein 1 (FY12282)

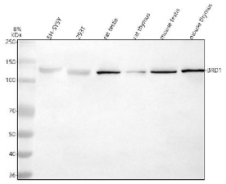
Catalog No.	Formulation	Size
FY12282	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

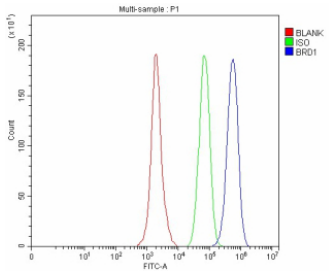
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	O95696
Localization	Nucleus
Applications	Western Blot : 0.25-0.5ug/ml Immunocytochemistry/Immunofluorescence : 5ug/ml ELISA : 0.1-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This BRD1 antibody is available for research use only.



Immunofluorescent staining of BRD1 using anti-BRD1 antibody (green) and anti-Beta Tubulin antibody (red). BRD1 was detected in immunocytochemical section of HELA cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/ml rabbit anti-BRD1 antibody and mouse anti-Beta Tubulin antibody overnight at 4oC. DyLight 488 Conjugated Goat Anti-Rabbit IgG and Cy3 Conjugated Goat Anti-Mouse IgG were used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Western blot analysis of BRD1 using anti-BRD1 antibody. Lane 1: human SH-SY5Y whole cell lysates, Lane 2: human 293T whole cell lysates, Lane 3: rat testis tissue lysates, Lane 4: rat thymus tissue lysates, Lane 5: mouse testis tissue lysates, Lane 6: mouse thymus tissue lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-BRD1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. The expected molecular weight of BRD1 is ~120 kDa.



Flow Cytometry analysis of SH-SY5Y cells using anti-BRD1 antibody. Overlay histogram showing SH-SY5Y cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-BRD1 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

BRD1 antibody detects Bromodomain-containing protein 1, encoded by the BRD1 gene on chromosome 22q13.33. BRD1 antibody is widely used in epigenetics, transcription regulation, and psychiatric disorder research. BRD1 is a chromatin-associated protein that functions as part of histone acetyltransferase complexes, including HBO1 and MOZ/MORF, which regulate transcriptional activation. It contributes to histone acetylation at gene promoters, influencing chromatin accessibility and gene expression. BRD1 plays key roles in neuronal development, hematopoiesis, and immune responses.

Structurally, BRD1 is a ~120 kDa nuclear protein that contains a bromodomain for acetyl-lysine recognition, a PHD finger, and other protein interaction motifs. These domains enable BRD1 to interact with histone tails, transcription factors, and co-activators. Alternative splicing generates multiple isoforms that may provide tissue-specific functions. BRD1 predominantly localizes to chromatin-rich nuclear compartments.

Functionally, BRD1 acts as a scaffold and chromatin reader, recruiting histone acetyltransferases to target promoters. It regulates genes involved in neurodevelopment, immune signaling, and cell cycle control. Knockdown of BRD1 disrupts neuronal differentiation and immune cell function, emphasizing its developmental roles. Researchers use BRD1 antibody to investigate chromatin remodeling, histone modifications, and transcriptional control.

Clinically, BRD1 has been linked to neuropsychiatric disorders, including schizophrenia and bipolar disorder. Genetic variants near BRD1 influence risk of mental illness, possibly by altering chromatin regulation during brain development. Dysregulation of BRD1 has also been reported in cancer, where it contributes to abnormal gene expression programs. NSJ Bioreagents provides BRD1 antibody for studies of chromatin biology, neuroscience, and oncology.

Experimentally, BRD1 antibody is used in western blotting to detect the ~120 kDa protein, in chromatin immunoprecipitation (ChIP) to study histone acetylation complexes, and in immunohistochemistry to analyze tissue distribution. Co-immunoprecipitation with BRD1 antibody identifies interactions with histone acetyltransferases and transcriptional regulators.

Application Notes

Optimal dilution of the BRD1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human BRD1 recombinant protein (Position: R395-Q913) was used as the immunogen for the BRD1 antibody.

Storage

After reconstitution, the BRD1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.