SANTA CRUZ BIOTECHNOLOGY, INC.

BRD3 (2088C3a): sc-81202

BACKGROUND

The bromodomain-containing proteins include BRD2, BRD3, BRD4 and BRDT. BRD2 (RING3 protein) is a mitogen-activated nuclear protein whose gene is located in the human MHC II region, suggesting its relation to HLA-associated diseases. The gene encoding BRD3 (RING3-like protein) contains two bromodomains and maps to chromosome 9q34.2. BRD4 (HUNK1 protein) is a nuclear protein involved in the regulation of chromosomal dynamics during mitosis. The testis-specific bromodomain protein BRDT contains a PEST sequence, indicating that it undergoes rapid intracellular degradation. The bromodomain-containing proteins are ubiquitously expressed.

REFERENCES

1. Thorpe, K.L., et al. 1997. Chromosomal localization, gene structure and transcription pattern of the ORFX gene, a homologue of the MHC-linked RING3 gene. Gene 200: 177-183.
2. Zhou, M., et al. 2003. Expression of BRD7-interacting proteins, BRD2 and BRD3, in nasopharyngeal carcinoma tissues. Ai Zheng 22: 123-127.
3. Shang, E., et al. 2004. Identification of unique, differentiation stage-specific patterns of expression of the bromodomain-containing genes BRD2, BRD3, BRD4, and BRDT in the mouse testis. Gene Expr. Patterns 4: 513-519.
4. Kanno, T., et al. 2004. Selective recognition of acetylated histones by bromodomain proteins visualized in living cells. Mol. Cell 13: 33-43.

CHROMOSOMAL LOCATION

Genetic locus: BRD3 (human) mapping to 9q34.2; Brd3 (mouse) mapping to 2 A3.

SOURCE

BRD3 (2088C3a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of BRD3 of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

BRD3 (2088C3a) is recommended for detection of BRD3 isoform 1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for BRD3 siRNA (h): sc-60284, BRD3 siRNA (m): sc-60285, BRD3 shRNA Plasmid (h): sc-60284-SH, BRD3 shRNA Plasmid (m): sc-60285-SH, BRD3 shRNA (h) Lentiviral Particles: sc-60284-V and BRD3 shRNA (m) Lentiviral Particles: sc-60285-V.

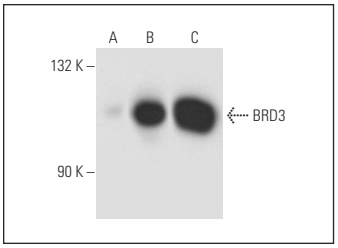
Molecular Weight of BRD3: 80 kDa.

Positive Controls: BRD3 (m): 293T Lysate: sc-126513, NIH/3T3 whole cell lysate: sc-2210 or HeLa nuclear extract: sc-2120.

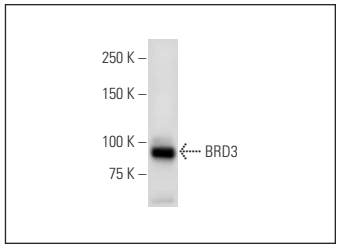
STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

DATA



BRD3 (2088C3a): sc-81202. Western blot analysis of BRD3 expression in non-transfected: sc-117752 (**A**) and mouse BRD3 transfected: sc-126513 (**B**) 293T whole cell lysates and HeLa nuclear extract (**C**).



BRD3 (2088C3a): sc-81202. Western blot analysis of BRD3 expression in NIH/3T3 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Asangani, I.A., et al. 2014. Therapeutic targeting of BET bromodomain proteins in castration-resistant prostate cancer. Nature 510: 278-282.
2. Lu, J., et al. 2015. Hijacking the E3 ubiquitin ligase cereblon to efficiently target BRD4. Chem. Biol. 22: 755-763.
3. Raina, K., et al. 2016. PROTAC-induced BET protein degradation as a therapy for castration-resistant prostate cancer. Proc. Natl. Acad. Sci. USA 113: 7124-7129.
4. Sherman, M.H., et al. 2017. Stromal cues regulate the pancreatic cancer epigenome and metabolome. Proc. Natl. Acad. Sci. USA 114: 1129-1134.
5. Sun, C., et al. 2018. BRD4 inhibition is synthetic lethal with PARP inhibitors through the induction of homologous recombination deficiency. Cancer Cell 33: 401-416.
6. Gollavilli, P.N., et al. 2018. EWS/ETS-driven Ewing sarcoma requires BET bromodomain proteins. Cancer Res. 78: 4760-4773.
7. Wakita, M., et al. 2020. A BET family protein degrader provokes senolysis by targeting NHEJ and autophagy in senescent cells. Nat. Commun. 11: 1935.
8. Chen, Y., et al. 2020. *H. pylori* infection confers resistance to apoptosis via BRD4-dependent BIRC3 eRNA synthesis. Cell Death Dis. 11: 667.
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RESEARCH USE

For research use only, not for use in diagnostic procedures.