

BRD2 (G-4): sc-393720

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.

CHROMOSOMAL LOCATION

Genetic locus: BRD2 (human) mapping to 6p21.32; Brd2 (mouse) mapping to 17 B1.

SOURCE

BRD2 (G-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-22 at the N-terminus of BRD2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BRD2 (G-4) is available conjugated to agarose (sc-393720 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393720 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393720 PE), fluorescein (sc-393720 FITC), Alexa Fluor[®] 488 (sc-393720 AF488), Alexa Fluor[®] 546 (sc-393720 AF546), Alexa Fluor[®] 594 (sc-393720 AF594) or Alexa Fluor[®] 647 (sc-393720 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-393720 AF680) or Alexa Fluor[®] 790 (sc-393720 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-393720 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

BRD2 (G-4) is recommended for detection of BRD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

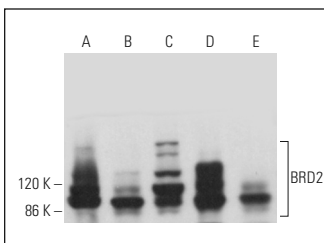
BRD2 (G-4) is also recommended for detection of BRD2 in additional species, including equine and bovine.

Suitable for use as control antibody for BRD2 siRNA (h): sc-60282, BRD2 siRNA (m): sc-60283, BRD2 siRNA (r): sc-270005, BRD2 shRNA Plasmid (h): sc-60282-SH, BRD2 shRNA Plasmid (m): sc-60283-SH, BRD2 shRNA Plasmid (r): sc-270005-SH, BRD2 shRNA (h) Lentiviral Particles: sc-60282-V, BRD2 shRNA (m) Lentiviral Particles: sc-60283-V and BRD2 shRNA (r) Lentiviral Particles: sc-270005-V.

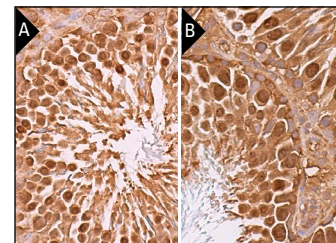
Molecular Weight of BRD2: 88 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, Sol8 cell lysate: sc-2249 or NIH/3T3 whole cell lysate: sc-2210.

DATA



BRD2 (G-4): sc-393720. Western blot analysis of BRD2 expression in Caco-2 (A), Sol8 (B), NIH/3T3 (C), L6 (D) and PC-12 (E) whole cell lysates.



BRD2 (G-4): sc-393720. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat testis tissue showing nuclear and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (B).

SELECT PRODUCT CITATIONS

1. Tian, X.P., et al. 2020. BRD2 induces drug resistance through activation of the RasGRP1/Ras/ERK signaling pathway in adult T-cell lymphoblastic lymphoma. *Cancer Commun.* 40: 245-259.
2. Zhang, G.M., et al. 2022. Reciprocal positive regulation between BRD4 and YAP in GNAQ-mutant uveal melanoma cells confers sensitivity to BET inhibitors. *Pharmacol. Res.* 184: 106464.
3. Chen, H., et al. 2023. BET inhibitors target the SCLC-N subtype of small-cell lung cancer by blocking NEUROD1 transactivation. *Mol. Cancer Res.* 21: 91-101.

RESEARCH USE

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