

BRD4 (C-2): sc-518158

BACKGROUND

BRD4 belongs to the BET family, a group of structurally related proteins containing two bromodomains. Through these two domains, BRD4 associates with mitotic chromosomes and its expression correlates with cell growth. Expression of BRD4 inhibits cell cycle progression from G₁ to S, due to binding to the largest subunit of replication factor C (RFC) to prevent DNA elongation. Altered BRD4 function correlates with poorly differentiated carcinoma, with aggressive phenotype and a highly lethal outcome.

REFERENCES

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- Houzelstein, D., Bullock, S.L., Lynch, D.E., Grigorieva, E.F., Wilson, V.A. and Beddington, R.S. 2002. Growth and early postimplantation defects in mice deficient for the bromodomain-containing protein BRD4. *Mol. Cell. Biol.* 22: 3794-3802.
- Maruyama, T., Farina, A., Dey, A., Cheong, J., Bermudez, V.P., Tamura, T., Sciortino, S., Shuman, J., Hurwitz, J. and Ozato, K. 2002. A mammalian bromodomain protein, BRD4, interacts with replication factor C and inhibits progression to S phase. *Mol. Cell. Biol.* 22: 6509-6520.
- French, C.A., Miyoshi, I., Kubonishi, I., Grier, H.E., Perez-Atayde, A.R. and Fletcher, J.A. 2003. BRD4-NUT fusion oncogene: a novel mechanism in aggressive carcinoma. *Cancer Res.* 63: 304-307.
- You, J., Croyle, J.L., Nishimura, A., Ozato, K. and Howley, P.M. 2004. Interaction of the bovine papillomavirus E2 protein with BRD4 tethers the viral DNA to host mitotic chromosomes. *Cell* 117: 349-360.
- LocusLink Report (LocusID: 23476). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: BRD4 (human) mapping to 19p13.12.

SOURCE

BRD4 (C-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 662-683 of BRD4 of human origin.

PRODUCT

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

BRD4 (C-2) is available conjugated to agarose (sc-518158 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518158 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518158 PE), fluorescein (sc-518158 FITC), Alexa Fluor® 488 (sc-518158 AF488), Alexa Fluor® 546 (sc-518158 AF546), Alexa Fluor® 594 (sc-518158 AF594) or Alexa Fluor® 647 (sc-518158 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518158 AF680) or Alexa Fluor® 790 (sc-518158 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

BRD4 (C-2) is recommended for detection of BRD4 of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BRD4 siRNA (h): sc-43639, BRD4 shRNA Plasmid (h): sc-43639-SH and BRD4 shRNA (h) Lentiviral Particles: sc-43639-V.

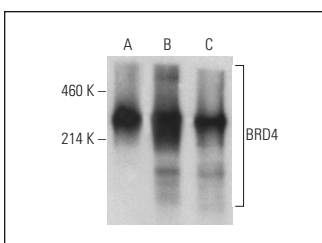
Molecular Weight of BRD4 isoforms: 152/80 kDa.

Positive Controls: Caco-2 cell lysate: sc-2262, TT whole cell lysate: sc-364195 or Jurkat whole cell lysate: sc-2204.

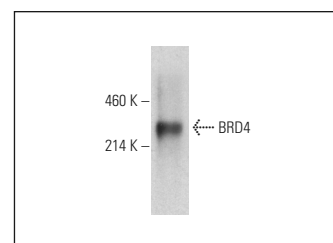
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BPFITC: sc-516140 or m-IgGκ BPE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BRD4 (C-2): sc-518158. Western blot analysis of BRD4 expression in Caco-2 (A), TT (B) and Jurkat (C) whole cell lysates. Detection reagent used: m-IgGκ BPHRP: sc-516102.



BRD4 (C-2): sc-518158. Western blot analysis of BRD4 expression in HeLa whole cell lysate. Detection reagent used: m-IgGκ BPHRP: sc-516102.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.