SANTA CRUZ BIOTECHNOLOGY, INC.

BRF2 (C-8): sc-390312

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human cells contain two types of RNA polymerase III transcription factor (TFIIIB), BRF1 and BRF2. BRF1, functions in recruitment of RNA polymerase III to the promoter for multiple rounds of transcription. BRF1 precisely positions TFIIIB on the upstream promoter-less DNA by creating stable protein-protein interactions with TATA-binding protein (TBP), another component of TFIIIB. BRF2, is recruited to type 3 promoters such as the human U6 snRNA promoter. It differs from BRF1-TFIIIB in that it contains the TFIIB-related factor BRF2 instead of Brf1 and its three components do not form a stable complex.

REFERENCES

1. Wang, Z. and Roeder, R.G. 1995. Structure and function of a human transcription factor TFIIIB subunit that is evolutionarily conserved and contains both TFIIB- and high-mobility-group protein 2-related domains. Proc. Natl. Acad. Sci. USA 92: 7026-7030.
2. Kassavetis, G.A., et al. 1995. Cloning, expression, and function of TFC5, the gene encoding the B'' component of the *Saccharomyces cerevisiae* RNA polymerase III transcription factor TFIIIB. Proc. Natl. Acad. Sci. USA 92: 9786-9790.
3. Whitehall, S.K., et al. 1995. The symmetry of the yeast U6 RNA gene's TATA box and the orientation of the TATA-binding protein in yeast TFIIIB. Genes Dev. 9: 2974-2985.

CHROMOSOMAL LOCATION

Genetic locus: BRF2 (human) mapping to 8p11.23; Brf2 (mouse) mapping to 8 A2.

SOURCE

BRF2 (C-8) is a mouse monoclonal antibody raised against amino acids 19-318 mapping near the N-terminus of BRF2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BRF2 (C-8) is available conjugated to agarose (sc-390312 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390312 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390312 PE), fluorescein (sc-390312 FITC), Alexa Fluor® 488 (sc-390312 AF488), Alexa Fluor® 546 (sc-390312 AF546), Alexa Fluor® 594 (sc-390312 AF594) or Alexa Fluor® 647 (sc-390312 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390312 AF680) or Alexa Fluor® 790 (sc-390312 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

BRF2 (C-8) is recommended for detection of BRF2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for BRF2 siRNA (h): sc-106763, BRF2 siRNA (m): sc-141744, BRF2 shRNA Plasmid (h): sc-106763-SH, BRF2 shRNA Plasmid (m): sc-141744-SH, BRF2 shRNA (h) Lentiviral Particles: sc-106763-V and BRF2 shRNA (m) Lentiviral Particles: sc-141744-V.

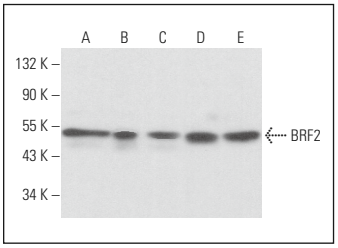
Molecular Weight of BRF2: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, F9 cell lysate: sc-2245 or Jurkat whole cell lysate: sc-2204.

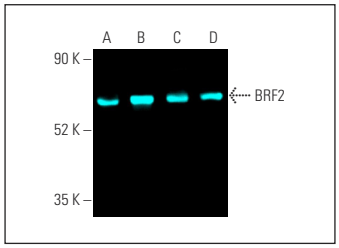
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BRF2 (C-8): sc-390312. Western blot analysis of BRF2 expression in HeLa (**A**), Jurkat (**B**), RPMI2650 (**C**), F9 (**D**) and Neuro-2A (**E**) whole cell lysates.



BRF2 (C-8): sc-390312. Fluorescent western blot analysis of BRF2 expression in DU 145 (**A**), Jurkat (**B**), Neuro-2A (**C**) and F9 (**D**) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2a} BP-CFL 647: sc-542738.

SELECT PRODUCT CITATIONS

1. Koo, J., et al. 2015. Induction of proto-oncogene BRF2 in breast cancer cells by the dietary soybean isoflavone daidzein. BMC Cancer 15: 905.
2. Chang, J.H., et al. 2023. BRF2 is mediated by microRNA-409-3p and promotes invasion and metastasis of HCC through the Wnt/β-catenin pathway. Cancer Cell Int. 23: 46.

RESEARCH USE

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