SANTA CRUZ BIOTECHNOLOGY, INC.

BUBR1 (8G1): sc-47744

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Human cells contain two related protein kinases, BUB1 and BUBR1, that appear to have evolved from a single ancestral BUB1 gene. Both kinases are concentrated near the surface of the kinetochore where they monitor kinetochore-microtubule interactions. BUB1 and BUBR1 bind to kinetochores and are postulated to be components of the mitotic checkpoint, which monitors kinetochore activities to determine if chromosomes have achieved alignment at the spindle equator. BUBR1 is essential for normal mitotic progression as it prevents cells from prematurely entering anaphase. BUB3 is a conserved component of the mitotic spindle assembly complex and is also involved with the essential spindle checkpoint pathway that operates during early embryogenesis.

CHROMOSOMAL LOCATION

Genetic locus: BUB1B (human) mapping to 15q15.1; Bub1b (mouse) mapping to 2 E5.

SOURCE

BUBR1 (8G1) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 1-350 of BUBR1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BUBR1 (8G1) is available conjugated to agarose (sc-47744 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-47744 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-47744 PE), fluorescein (sc-47744 FITC), Alexa Fluor® 488 (sc-47744 AF488), Alexa Fluor® 546 (sc-47744 AF546), Alexa Fluor® 594 (sc-47744 AF594) or Alexa Fluor® 647 (sc-47744 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-47744 AF680) or Alexa Fluor® 790 (sc-47744 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

BUBR1 (8G1) is recommended for detection of BUBR1 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), 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).

Suitable for use as control antibody for BUBR1 siRNA (h): sc-37542, BUBR1 siRNA (m): sc-37543, BUBR1 shRNA Plasmid (h): sc-37542-SH, BUBR1 shRNA Plasmid (m): sc-37543-SH, BUBR1 shRNA (h) Lentiviral Particles: sc-37542-V and BUBR1 shRNA (m) Lentiviral Particles: sc-37543-V.

Molecular Weight of BUBR1: 120 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

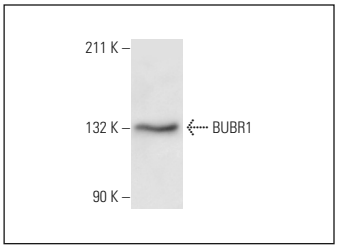
RESEARCH USE

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

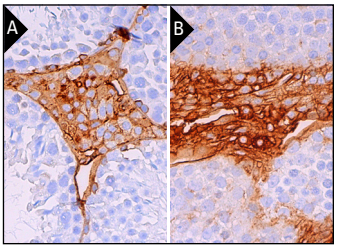
STORAGE

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

DATA



BUBR1 (8G1): sc-47744. Western blot analysis of BUBR1 expression in Jurkat whole cell lysate.



BUBR1 (8G1): sc-47744. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing cytoplasmic staining of Leydig cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded rat testis tissue showing cytoplasmic and membrane staining of Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Chung, K.S., et al. 2013. 6,7-dimethoxy-3-(3-methoxyphenyl)isoquinolin-1-amine induces mitotic arrest and apoptotic cell death through the activation of spindle assembly checkpoint in human cervical cancer cells. Carcinogenesis 34: 1852-1860.
2. Evans, G.E., et al. 2014. In the secretory endometria of women, luminal epithelia exhibit gene and protein expressions that differ from those of glandular epithelia. Fertil. Steril. 102: 307-317.e7.
3. Qian, J., et al. 2017. An attachment-independent biochemical timer of the spindle assembly checkpoint. Mol. Cell 68: 715-730.e5.
4. Martínez-Castillo, M., et al. 2018. Curcumin differentially affects cell cycle and cell death in acute and chronic myeloid leukemia cells. Oncol. Lett. 15: 6777-6783.
5. Pajuelo-Lozano, N., et al. 2020. Targeting MAD2 modulates stemness and tumorigenesis in human gastric cancer cell lines. Theranostics 10: 9601-9618.
6. Yatskevich, S., et al. 2021. Molecular mechanisms of APC/C release from spindle assembly checkpoint inhibition by APC/C SUMOylation. Cell Rep. 34: 108929.
7. Li, H., et al. 2022. Global phosphoproteomic analysis identified key kinases regulating male meiosis in mouse. Cell. Mol. Life Sci. 79: 467.

PROTOCOLS

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