SANTA CRUZ BIOTECHNOLOGY, INC.

BUBR1 (H-23): sc-130708

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. The 120 kDa 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.

REFERENCES

1. Donadelli, R., et al. 1998. Identification of a novel gene—SSK1—in human endothelial cells exposed to shear stress. Biochem. Biophys. Res. Commun. 246: 881-887.
2. Jablonski, S.A., et al. 1998. The hBUB1 and hBUBR1 kinases sequentially assemble onto kinetochores during prophase with hBUBR1 concentrating at the kinetochore plates in mitosis. Chromosoma 107: 386-396.
3. Chan, G.K., et al. 1999. Human BUBR1 is a mitotic checkpoint kinase that monitors CENP-E functions at kinetochores and binds the cyclosome/APC. J. Cell Biol. 146: 941-954.
4. Li, W., et al. 1999. BUBR1 phosphorylation is regulated during mitotic checkpoint activation. Cell Growth Differ. 10: 769-775.
5. Abrieu, A., et al. 2000. CENP-E as an essential component of the mitotic checkpoint *in vitro*. Cell 102: 817-826.
6. Kalitsis, P., et al. 2000. BUB3 gene disruption in mice reveals essential mitotic spindle checkpoint function during early embryogenesis. Genes Dev. 18: 2277-2282.

CHROMOSOMAL LOCATION

Genetic locus: BUB1B (human) mapping to 15q15.1.

SOURCE

BUBR1 (H-23) is a purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BUBR1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

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

APPLICATIONS

BUBR1 (H-23) is recommended for detection of BUBR1 of 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)] 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 shRNA Plasmid (h): sc-37542-SH and BUBR1 shRNA (h) Lentiviral Particles: sc-37542-V.

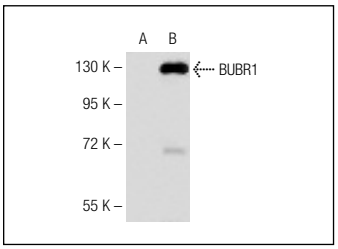
Molecular Weight of BUBR1: 120 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human BUBR1 transfected 293 whole cell lysates.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



BUBR1 (H-23): sc-130708. Western blot analysis of BUBR1 expression in non-transfected (**A**) and human BUBR1 transfected (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, S.H., et al. 2010. Mad2 inhibits the mitotic kinesin MKlp2. J. Cell Biol. 191: 1069-1077.

RESEARCH USE

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