Technical Data Sheet

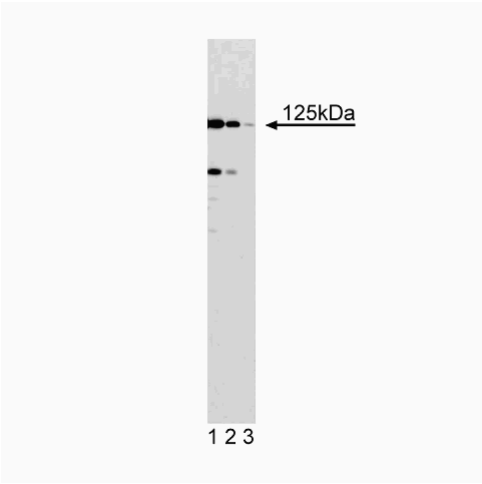
Purified Mouse Anti-Human BUBR1

Product Information

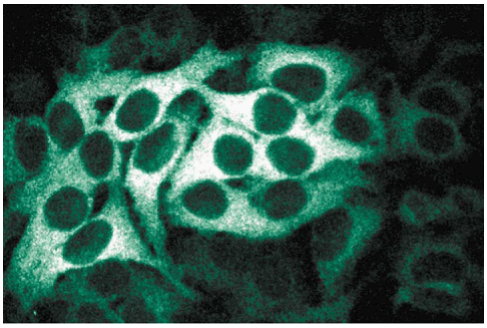
Material Number:	**612502**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	9/BUBR1
Immunogen:	Human BUBR1 aa. 276-388
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human
Target MW:	125 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Accurate chromosome segregation requires that all pairs of sister chromatids become appropriately atttached to mitotic spindles before the onset of anaphase. Cell cycle checkpoints monitor kinetochore-microtubule interactions, so that cell cycle progression can be delayed until proper chromosome attachments are formed. In yeast, *Bub1-3* genes are required for proper mitotic delay in response to unattached kinetochores. In mammals, the homologues to yeast Bub1 and Bub3 form a complex that binds kinetochores and has protein kinase activity. BUBR1 is a bub-related kinase homologous to Bub1 and MAD3. BUBR1 contains a nuclear localization signal and two highly conserved domains CD1 and CD2. CD1 is in the N-terminal region and is invoved in kinetochore localization, while CD2 is in the C-terminal region and is involved in kinase activity. BUBR1 is hyperphosphorylated during spindle checkpoint activation, and interacts with p55CDC and APC during spindle checkpoint function. In colorectal cancers, the BUBR1 gene has structural abnormalities that suggest BUBR1 is a tumor suppressor gene. Thus, BUBR1 may be a critical spindle checkpoint kinase and disruption of its function may be related to tumor formation.



Western blot analysis of BUBR1 on a HeLa cell lysate (Human cervical epitheloid carcinoma; ATCC CCL-2.2). *Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of the mouse anti-human BUBR1 antibody.*



Immunofluorescence staining of HeLa cells (Human cervical epitheloid carcinoma; ATCC CCL-2.2).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chan GK, Jablonski SA, Sudakin V, Hittle JC, Yen TJ. Human BUBR1 is a mitotic checkpoint kinase that monitors CENP-E functions at kinetochores and binds the cyclosome/APC. *J Cell Biol.* 1999; 146(5):941-954.(Biology)

Mizunuma M, Hirata D, Miyahara K, Tsuchiya E, Miyakawa T. Role of calcineurin and Mpk1 in regulating the onset of mitosis in budding yeast. *Nature.* 1998; 392(6673):303-306.(Biology)

Wu H, Lan Z, Li W, Wu S, Weinstein J, Sakamoto KM, Dai W. p55CDC/hCDC20 is associated with BUBR1 and may be a downstream target of the spindle checkpoint kinase. *Oncogene.* 2000; 19(40):4557-4562.(Biology)