Anti- Nuf2 antibody, rabbit serum

Product code	70-107
Size	100µl
Storage	Store at 4℃ for short term. For long term storage store at -20℃. Aliquot to avoid repeated freezing thawing.
Concentration	N/A
Buffer	0.05% sodium azide
Purity	Rabbit antiserum
Immunogen	Synthetic peptide CGGDSYAKIDEKTAELKRKMFKMS corresponding to the C-terminus region of human Nuf2
Isotype	Rabbit IgG
Reactivity	human and chicken Nuf2. Not tested with other species.
Special notes	N/A
Application	1. Western blotting (500~5,000 fold dilution) 2. Immunofluorescence staining (200~1,000 fold dilution) Methanol fixation is recommended for immunofluorescence staining.
Background	Nuf2 is a component of kinetochore-associated Ndc80 complex, which serves to attach microtubules to the kinetochore. Nuf2 is a conserved protein from yeast to human. Disruption of the Nuf2 gene in Schizosaccharomyces pombe causes defect in chromosome segregation and in the spindle checkpoint. Yeast Nuf2 disappears from the centromere during meiotic prophase when centromeres lose their connection to the spindle pole body, and plays a regulatory role in chromosome segregation. In human cells, Nuf2 specifically functions at kinetochores for stable microtubule attachment. Down regulation of the protein by RNA interference results in failure of the kinetochores to form attachments to the spindle microtubules. As a result, cells are blocked in the prometaphase stage with an active spindle checkpoint and undergo cell death. This antibody was prepared and tested by Prof. Tokuko Haraguchi at Kobe Advanced ICT Research Center, National Institute of Information and Communications Technology.
Data Link	UniProtKB Q9BZD4 (NUF2_HUMAN)

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Data Images: 70-107 Anti- Nuf2 antibody, rabbit serum

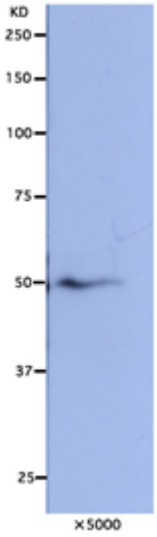

Fig.1 Detection of Nuf2 protein in HeLa cells by Western blotting using this antibody.
The antibody was diluted to 5,000 fold.
Human Nuf2 protein was detected as a 50 kD band (predicted mass is 54 kD).

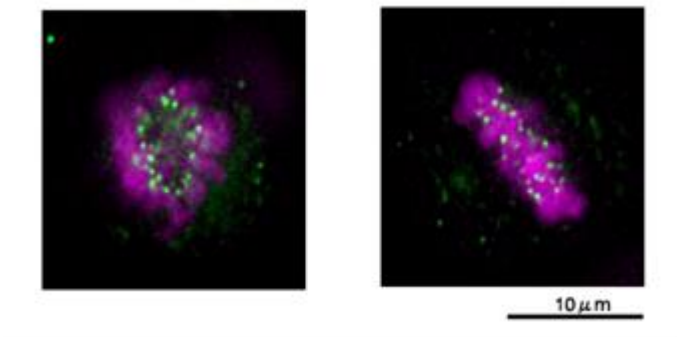

Fig.2 Detection of Nuf2 protein in HeLa cells by immunofluorescence staining using this antibody.
HeLa cells were fixed with methanol and subjected to immunofluorescence staining using this antibody.
The antibody was diluted to 500 fold. Chromosomes were stained by DAPI (violet). Nuf2 protein (green) actively localizes to kinetochores at the stages of prometaphase to anaphase.

References:

1. Wigge PA and Kilmaetin JV "The Ndc80p complex from Saccharomyces cerevisiae contains conserved centromere components and has a function in chromosome segregation." *J Cell Biol* **152**: 349-360 (2001) PMID: 11266451
2. Nabetani A, Koujin T, Tsutsumi C, Haraguchi T, Hiraoka Y "A conserved protein, Nuf2, is implicated in connecting the centromere to the spindle during chromosome segregation: a link between the kinetochore function and the spindle checkpoint." *Chromosoma* **110**: 322-334 (2001)

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PMID: 11685532

3. DeLuca JG, Moree B, Hickey JM, Kilmartin JV, Salmon ED "hNuf2 inhibition blocks stable kinetochore-microtubule attachment and induces mitotic cell death in HeLa cells." *J Cell Biol* **159**: 549-555 (2002) PMID: 12438418

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