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ProductInformation

Monoclonal Anti-Nuf2
Clone 28-37
Purified Mouse Immunoglobulin

Product Number **N 5287**

Product Description

Monoclonal Anti-Nuf2 (mouse IgG1isotype) is derived from the hybridoma 28-37 produced by the fusion of mouse myeloma cells (PAI cells) and splenocytes from BALB/c mice immunized with recombinant full length human Nuf2.[1] The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2).

Monoclonal Anti-Nuf2 recognizes human Nuf2.[1] The antibody can be used in various applications including ELISA, immunoblotting (~52 kDa),[1] immunocytochemistry,[1] and immunoprecipitation.[1]

Chromosome movements during mitosis are orchestrated primarily by the interaction of mitotic spindle microtubules with the kinetochore, the site of attachment of spindle microtubules to the centromere.[2] The kinetochore consists of several proteins including the Ndc80 protein complex, which consists of Nuf2, Hec1, Spc24, and Spc25. Nuf2 is a conserved protein from yeast and nematode to human. Disruption of the Nuf2p gene in *Schizosaccharomyces pombe* causes defects in chromosome segregation and in the spindle checkpoint. During the meiotic prophase at the time that the centrosomes lose their connection to the spindle pole body, Nuf2 is absent from the centrosomere.[3] 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 consequence, cells are blocked in the prometaphase stage with an active spindle checkpoint and undergo cell death.[4]

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~2 mg/mL

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in “frost-free” freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

By immunoblotting, a working antibody concentration of 0.5-1 µg/mL is recommended using total cel extract of A549 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Stucke, V.M., et al., Chromosoma, **113**, 1-15 (2004).
2. Scholey, J.M., et al., J. Cell Biol., **154**, 261-266 (2001).
3. Nabetani, A., et al., Chromosoma, **110**, 322-334 (2001).
4. DeLuca, J.G., et al., J. Cell Biol., **159**, 549-555 (2002).

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