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Product Information

Monoclonal Anti-Aurora-A Kinase

Clone 35C1

produced in mouse, purified immunoglobulin

Catalog Number **A1231**

Product Description

Monoclonal Anti-Aurora-A Kinase (mouse IgG2b isotype) is derived from the hybridoma 35C1 produced by the fusion of mouse myeloma cells (SP2/0-Ag14) and splenocytes from BALB/c mice immunized with recombinant human Aurora-A Kinase (Gene ID: 6790). The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Monoclonal Anti-Aurora-A Kinase recognizes human¹⁻³ and mouse¹ Aurora-A Kinase, ~46 kDa. The product is useful in ELISA,¹ immunoblotting,¹⁻³ immunoprecipitation,¹ and immunocytochemistry.^{1,2} The antibody does not inhibit kinase activity of Aurora-A kinase, so could be used to measure the aurora-A kinase activity *in vivo* after immunoprecipitation.¹

STK15 oncogene encodes for the Aurora-A Kinase protein that is over-expressed in high-grade tumors. During S-phase to mitosis progression in cell cycle, the protein is located at the centrosome. It is involved in centrosome separation, centrosome maturation, bipolar spindle assembly and stability.¹⁻³ Monopolar spindles are formed in the cell when the expression of Aurora-A kinase is inhibited by an appropriate siRNA, while over-expression of this protein results in centrosome amplification and polyploidy of the cell as a consequence of cytokinesis failure.² Aurora-A activity is required for the recruitment of CDK-cyclin B1 to the centrosome, which correlates with its activation and the commitment of the cells to mitosis. Activation of CDK1 kinase is by dephosphorylation of Tyr¹⁵ by CDC25B. Aurora-A kinase phosphorylates CDC25B both *in vitro* and *in vivo* at Ser³⁵³. This phosphorylation occurs at the centrosome during progression from prophase to anaphase. This regulation is important for entry into mitosis.¹⁻⁴

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 2 mg/ml.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is 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

Immunoblotting: a working concentration of 0.25-0.5 µg/ml is recommended using HeLa total cell extract.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

1. Cremet, J.Y., et al., *Mol. Cell. Biochem.*, **243**, 123-131 (2003).
2. Dutertre, S., et al., *J. Cell Sci.*, **117**, 2523-2531 (2004).
3. Krystyniak, A., et al., *Oncogene*, **25**, 338-348 (2006).
4. Pugacheva, E.N., and Golmis, E.A., *Cell Cycle*, **5**, 384-391 (2006).

EK,MT, PHC 02/07-1