



Qty: 100 µg/200 µL

Mouse anti-Aurora A Kinase (35C1)

Catalog No.: 458900

Mouse anti-Aurora A Kinase (35C1)

FORM

This affinity-purified mouse monoclonal antibody is supplied as a 200 µL aliquot at a concentration of 0.5 mg/mL in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

Clone: 35C1

Isotype: IgG1

IMMUNOGEN

Recombinant protein derived from the full length of human Aurora A Kinase protein (accession # O14965, NP_003591), which is identical to chimpanzee and 91% similar to horse, 89% similar to canine and bovine, 88% similar to swine, 83% and 82% similar to rat and mouse, respectively.

SPECIFICITY

This antibody is specific for human Aurora A Kinase (Serine/threonine-protein kinase 6, serine/threonine kinase 15, Aurora-A, Aurora/IPL1-related kinase 1, Aurora-related kinase 1, hARK1, breast tumor-amplified kinase or BTAK) protein. On Western blots of human Jurkat cells, it identifies the target band at ~46 kDa.

REACTIVITY

Reactivity has been confirmed with human HeLa cells using Western blotting. The reactivity has also been confirmed with human MCF7 cells by immunoprecipitation and immunofluorescence as well as mouse LLC1 cells by immunofluorescence.¹ Based on amino acid sequence homology, reactivity with chimpanzee, Rhesus monkey, canine, bovine, swine, rat and mouse is also expected.

| Sample | Western Blotting | Immunofluorescence | Immunoprecipitation |
|------------|------------------|--------------------|---------------------|
| Human | +++ | +++ ⁽¹⁾ | +++ ⁽¹⁾ |
| Chimpanzee | ND | ND | ND |
| Horse | ND | ND | ND |
| Canine | ND | ND | ND |
| Bovine | ND | ND | ND |
| Swine | ND | ND | ND |
| Rat | ND | ND | ND |
| Mouse | ND | +++ ⁽¹⁾ | ND |

¹ (Excellent +++, Good ++, Poor +, No reactivity 0, Not applicable N/A, Not determined ND)

USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 2 µg/mL

Immunofluorescence: 2 µg/mL

Immunoprecipitation: 5 µg/IP reaction

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI458900

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

BACKGROUND

The Aurora family of serine/threonine kinases is important for the regulation of centrosome maturation, chromosome segregation, and cytokinesis during mitosis. Aurora A kinase is named after the *Drosophila* aurora kinase Nigg.¹ There are three different kinases (aurora A, aurora B, and aurora C) which are involved in centrosome separation. Aurora kinases share a conserved C-terminal kinase catalytic domain but have a different N-terminal, non-catalytic domain.² They play a role in cell cycle regulation during anaphase and/or telophase in relation to the function of the centrosome/spindle pole region during chromosome segregation. Aurora kinases show different localization during mitosis and fulfill different functions. They may be involved in microtubule formation and/or stabilization.³

Aurora A kinase is also known as breast-tumor amplified kinase (BTAK). The most important feature of these kinases is that they play a key role during tumor formation and progression. Overexpression of Aurora kinases in mammalian cells leads to genetic instability and transformation. Increased levels of Aurora kinases have also been linked to a broad range of human tumors.⁴ Aurora kinases are potential targets for cancer therapy. Previous studies have validated Aurora kinase A as a therapeutic target in multiple myeloma (MM), and have demonstrated in vitro anti-myeloma effects of small molecule Aurora kinase inhibitors that inhibit both Aurora A and B.⁵

REFERENCES

1. Cremet JY et al. *M and C Biochem* 243: 123-131, 2003.
2. Guan Z. et al. *Cancer Res* 67(21):10436-44, 2007.
3. Chan F et al. *Mol Cancer Ther* 6 (12):3147-57, 2007.
4. Sankaran S, et al. *Cancer Res* 67(23):11186-94, 2007.
5. Soncini C et al. *Clin Cancer Res* 12(13):4080-9, 2006.

RELATED PRODUCTS

| Product | Conjugate | Cat. No. |
|-----------------------------|------------------|-----------------|
| Protein A | Sepharose 4B | 10-1041 |
| rec-Protein G | Sepharose 4B | 10-1241 |
| ZyMAX™ Goat anti-rabbit IgG | Unconjugated | 81-6100 |
| ZyMAX™ Goat anti-mouse IgG | Unconjugated | 81-6500 |

Secondary antibody conjugates.

| Conjugate | Goat anti-rabbit IgG (H+L) | Goat anti-mouse IgG (H+L) | Ex/Em* | Fluorescence similar to-- |
|------------------|-----------------------------------|----------------------------------|---------------|----------------------------------|
| Alexa Fluor® 488 | A11008 | A11001 | 495/519 | FITC |
| Alexa Fluor® 555 | A21428 | A21422 | 555/565 | Cy3 |
| Alexa Fluor® 594 | A11012 | A11005 | 590/617 | Texas Red |
| Alexa Fluor® 647 | A21244 | A21235 | 650/668 | Cy5 |
| HRP | 81-6120 | 81-6520 | NA** | NA |
| AP | 81-6122 | 81-6522 | NA | NA |
| Biotin | B2770 | B2763 | NA | NA |

*Excitation/emission (nm); **Not applicable

For additional secondary antibody conjugates, visit www.invitrogen.com/antibodies

For Research Use Only

www.invitrogen.com

Invitrogen Corporation • 542 Flynn Rd • Camarillo • CA 93012 • Tel: 800.955.6288 • E-mail: techsupport@invitrogen.com

PI458900

(Rev 10/08) DCC-08-1089

Important Licensing Information - These products may be covered by one or more Limited Use Label Licenses (see the Invitrogen Catalog or our website, www.invitrogen.com). By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.