SANTA CRUZ BIOTECHNOLOGY, INC.

Aurora A (xG-14): sc-27884

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The Power to Question

BACKGROUND

Activation of the oncogenic protein kinase Aurora A regulates meiotic and mitotic cell cycles in eukaryotic cells. Specifically, Aurora A plays a key role in G_2/M progression. Activation occurs via autophosphorylation, and while 14 sites are subject to this, only the threonine residue at position 295 is required for activity. Though autophosphorylation mediates activation, a number of other proteins influence activation, including the spindle assembly factor TPX2 and p53.

REFERENCES

1. Scrittori, L., et al. 2001. pEg2 Aurora A kinase, Histone H3 phosphorylation, and chromosome assembly in *Xenopus* egg extract. J. Biol. Chem. 276: 30002-30010.
2. Arlot-Bonnemains, Y., et al. 2001. Identification of a functional destruction box in the *Xenopus laevis* Aurora A kinase pEg2. FEBS Lett. 508: 149-152.
3. Meraldi, P., et al. 2002. Aurora A overexpression reveals tetraploidization as a major route to centrosome amplification in $p53^{-/-}$ cells. EMBO J. 21: 483-492.
4. Giet, R., et al. 2002. *Drosophila* Aurora A kinase is required to localize D-TACC to centrosomes and to regulate astral microtubules. J. Cell Biol. 156: 437-451.
5. Tanaka, M., et al. 2002. Cell cycle-dependent regulation of human Aurora A transcription is mediated by periodic repression of E4TF1. J. Biol. Chem. 277: 10719-10726.
6. Castro, A., et al. 2003. Involvement of Aurora A kinase during meiosis I-II transition in *Xenopus* oocytes. J. Biol. Chem. 278: 2236-2241.
7. Prigent, C., et al. 2003. Aurora A and mitotic commitment. Cell 114: 531-532.
8. Haydon, C.E., et al. 2003. Identification of novel phosphorylation sites on *Xenopus laevis* Aurora A and analysis of phosphopeptide enrichment by immobilized metal-affinity chromatography. Mol. Cell. Proteomics 2: 1055-1067.

SOURCE

Aurora A (xG-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Aurora A of *Xenopus laevis* origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-27884 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Aurora A (xG-14) is recommended for detection of Aurora A of *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

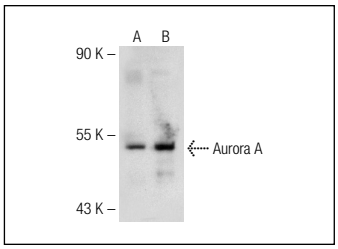
Molecular Weight of Aurora A: 46 kDa.

Positive Controls: A6 whole cell lysate or XLK-WG whole cell lysate: sc-364801.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Aurora A (xG-14): sc-27884. Western blot analysis of Aurora A expression in A6 (**A**) and XLK-WG (**B**) whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.