



ARK-3 (N-19): sc-47800

BACKGROUND

The Aurora kinase family includes Aurora related kinase-1 (also designated ARK-1, STK15, Aurora2, Aurora A, and Aik1), Aurora related kinase-2 (also designated ARK-2, STK12, Aik2, Aurora1, and Aurora B) and Aurora related kinase-3 (also designated ARK-3, Aik3 and Aurora C). They are centrosome-associated serine/threonine kinases that regulate centrosome separation, bipolar spindle assembly and chromosome segregation during mitosis. ARK-3 forms complexes with ARK-2 and inner centromere proteins, such as survivin and INCENP, and organizes microtubules in relation to centrosome/spindle function during mitosis. ARK-3 is highly expressed in testis in addition to its expression in several other tissues. ARK-3 has also been shown to be over-expressed in many different types of cancer cells, suggesting it normally functions as an antioncogenic agent.

REFERENCES

1. Sasai, K., et al. 2004. Aurora-C kinase is a novel chromosomal passenger protein that can complement Aurora-B kinase function in mitotic cells. *Cell Motil. Cytoskeleton* 59: 249-263.
2. Chen, HL., et al. 2005. Overexpression of an Aurora-C kinase-deficient mutant disrupts the Aurora-B/INCENP complex and induces polyploidy. *J. Biomed. Sci.* 12: 297-310.
3. Yan, X., et al. 2005. Aurora C is directly associated with survivin and required for cytokinesis. *Genes Cells* 10: 617-626.
4. Yan, X., et al. 2005. Cloning and characterization of a novel human Aurora-C splicing variant. *Biochem. Biophys. Res. Commun.* 328: 353-361.
5. Dutertre, S., et al. 2005. The absence of p53 aggravates polyploidy and centrosome number abnormality induced by Aurora-C overexpression. *Cell Cycle* 4: 1783-1787.
6. Bolanos-Garcia, VM. 2005. Aurora kinases. *Int. J. Biochem. Cell Biol.* 37: 1572-1577.
7. Ulisse, S., et al. 2006. Expression of Aurora kinases in human thyroid carcinoma cell lines and tissues. *Int. J. Cancer* 119: 275-282.
8. Tang, CJ., et al. 2006. Dynamic localization and functional implications of Aurora-C kinase during male mouse meiosis. *Dev. Biol.* 290: 398-410.

CHROMOSOMAL LOCATION

Genetic locus: AURKC (human) mapping to 19q13.43; Aurkc (mouse) mapping to 7 A2-A3.

SOURCE

ARK-3 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of ARK-3 of human 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-47800 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARK-3 (N-19) is recommended for detection of ARK-3 of human 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).

Suitable for use as control antibody for ARK-3 siRNA (h): sc-60202, ARK-3 shRNA Plasmid (h): sc-60202-SH and ARK-3 shRNA (h) Lentiviral Particles: sc-60202-V.

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.

STORAGE

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

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.