

ARK-1 (H-130): sc-25425

BACKGROUND

Aurora related kinase-1 (ARK-1, STK15, Aurora2, Aik1) and -2 (ARK-2, STK12, Aurora1) are centrosome-associated serine/threonine kinases that regulate centrosome separation, bipolar spindle assembly and chromosome segregation during mitosis. ARK-1 and -2 are expressed in the nucleus and localize to distinct portions of mitotic machinery such as the centrosome, spindle poles (ARK-1) and midbody (ARK-2) during mitosis. ARK-1 and -2 transcripts are present at high levels in human thymus and fetal liver. ARK-1 protein has elevated expression in colon carcinoma lines (HT-29, SNU-C2B, COLO 205, SW480, 837 and 948) and accumulates during metaphase in HeLa cells. ARK-2 protein levels are maximal during both S and G₂/M phases, whereas ARK-1 protein is degraded after G₂/M via the ubiquitin-proteasome pathway. ARK-2 has a unique genetic locus relative to ARK-1, suggesting that these two kinases, with oncogenic potential, have different roles in cell cycle progression.

CHROMOSOMAL LOCATION

Genetic locus: AURKA (human) mapping to 20q13.2; Aurka (mouse) mapping to 2 H3.

SOURCE

ARK-1 (H-130) is a rabbit polyclonal antibody raised against amino acids 1-130 mapping at the N-terminus of ARK-1 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.

Available as agarose conjugate for immunoprecipitation, sc-25425 AC, 500 µg/0.25 ml agarose in 1 ml.

STORAGE

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

APPLICATIONS

ARK-1 (H-130) is recommended for detection of ARK-1 of mouse, rat and 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-1 siRNA (h): sc-29731, ARK-1 siRNA (m): sc-29732, ARK-1 shRNA Plasmid (h): sc-29731-SH, ARK-1 shRNA Plasmid (m): sc-29732-SH, ARK-1 shRNA (h) Lentiviral Particles: sc-29731-V and ARK-1 shRNA (m) Lentiviral Particles: sc-29732-V.

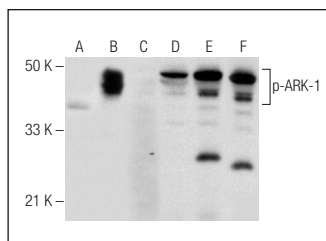
Molecular Weight of ARK-1: 46 kDa.

Positive Controls: mouse testis extract: sc-2405, MOLT-4 cell lysate: sc-2233 or HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Western blot analysis of ARK-1 phosphorylation in untreated (**A,D**), nocodazole treated (**B,E**) and nocodazole and lambda protein phosphatase (sc-200312A) treated (**C,F**) HeLa whole cell lysates. Antibodies tested include p-ARK-1 (95, Thr 288): sc-293126 (**A,B,C**) and ARK-1 (H-130): sc-25425 (**D,E,F**).

SELECT PRODUCT CITATIONS

- Yin, N., et al. 2012. IQGAP1 interacts with Aurora-A and enhances its stability and its role in cancer. *Biochem. Biophys. Res. Commun.* 421: 64-69.
- Ertych, N., et al. 2014. Increased microtubule assembly rates influence chromosomal instability in colorectal cancer cells. *Nat. Cell Biol.* 16: 779-791.

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.

MONOS
Satisfaction
Guaranteed

Try **ARK-1 (C-1): sc-398814** or **ARK-1 (A-11): sc-514374**, our highly recommended monoclonal alternatives to ARK-1 (H-130).