

ARK-1 (N-20): sc-14318

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 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-14318 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARK-1 (N-20) is recommended for detection of ARK-1 (also designated STK6) of mouse 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: 45.9 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ARK-1 (m2): 293T Lysate: sc-126439 or ARK-1 (h2): 293T Lysate: sc-114547.

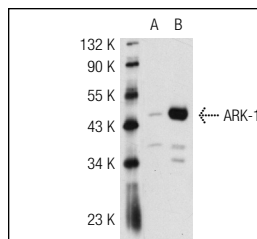
STORAGE

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

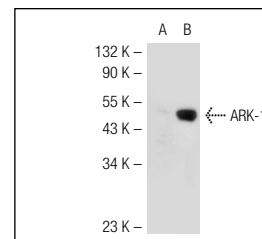
RESEARCH USE

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

DATA



ARK-1 (N-20): sc-14318. Western blot analysis of ARK-1 expression in non-transfected: sc-117752 (A) and human ARK-1 transfected: sc-114547 (B) 293T whole cell lysates.



ARK-1 (N-20): sc-14318. Western blot analysis of ARK-1 expression in non-transfected: sc-117752 (A) and mouse ARK-1 transfected: sc-126439 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Neben, K., et al. 2004. Microarray-based screening for molecular markers in medulloblastoma revealed STK15 as independent predictor for survival. *Cancer Res.* 64: 3103-3111.
2. Lentini, L., et al. 2007. Simultaneous Aurora-A/STK15 overexpression and centrosome amplification induce chromosomal instability in tumour cells with a MIN phenotype. *BMC Cancer* 7: 212.
3. Ireland, J.T., et al. 2007. A role for IκB kinase 2 in bipolar spindle assembly. *Proc. Natl. Acad. Sci. USA* 104: 16940-16945.
4. Wiseman, S.M., et al. 2007. Identification of molecular markers altered during transformation of differentiated into anaplastic thyroid carcinoma. *Arch. Surg.* 142: 717-729.
5. Wiseman, S.M., et al. 2007. Anaplastic thyroid carcinoma: expression profile of targets for therapy offers new insights for disease treatment. *Ann. Surg. Oncol.* 14: 719-729.
6. Amato, A., et al. 2009. CENPA overexpression promotes genome instability in pRb-depleted human cells. *Mol. Cancer* 8: 119.
7. Amato, A., et al. 2009. RNAi mediated acute depletion of retinoblastoma protein (pRb) promotes aneuploidy in human primary cells via micronuclei formation. *BMC Cell Biol.* 10: 79.
8. D'Assoro, A.B., et al. 2010. Abrogation of p53 function leads to metastatic transcriptome networks that typify tumor progression in human breast cancer xenografts. *Int. J. Oncol.* 37: 1167-1176.

MONOS
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Try **ARK-1 (C-1): sc-398814** or **ARK-1 (A-11): sc-514374**, our highly recommended monoclonal alternatives to ARK-1 (N-20).