

ARK-1 (T-16): sc-14321

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 (T-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ARK-1 of mouse 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-14321 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ARK-1 (T-16) is recommended for detection of ARK-1 (also designated STK6) of mouse, rat and, to a lesser extent, 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: mouse testis extract: sc-2405 or ARK-1 (m2): 293T Lysate: sc-126439.

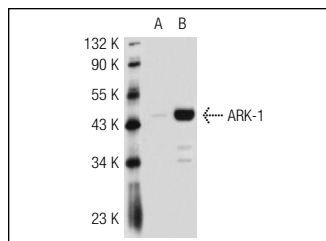
STORAGE

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

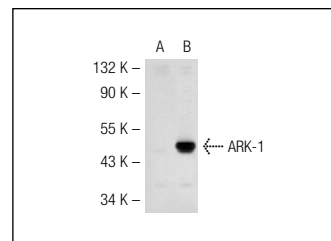
RESEARCH USE

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

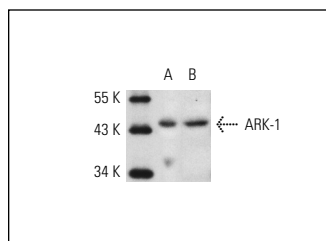
DATA



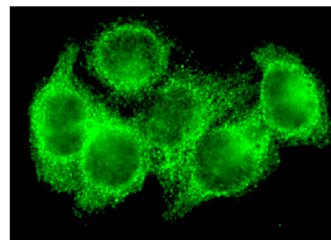
ARK-1 (T-16): sc-14321. Western blot analysis of ARK-1 expression in non-transfected: sc-117752 (A) and human ARK-1 transfected: sc-114547 (B) 293T whole cell lysates.



ARK-1 (T-16): sc-14321. 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.



ARK-1 (T-16): sc-14321. Western blot analysis of ARK-1 expression in HeLa whole cell lysate (A) and mouse testis extract (B).



ARK-1 (T-16): sc-14321. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic staining.

SELECT PRODUCT CITATIONS

1. Rawson, T.E., et al. 2008. A pentacyclic aurora kinase inhibitor (AKI-001) with high *in vivo* potency and oral bioavailability. J. Med. Chem. 51: 4465-4475.

PROTOCOLS

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

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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 (T-16).