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- Expressversand

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# ARK-1 (h2): 293 Lysate: sc-128042

## 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 G<sub>2</sub>/M phases, whereas ARK-1 protein is degraded after G<sub>2</sub>/M via the ubiquitin-proteasome pathway. ARK-2 has a unique genetic loci relative to ARK-1, suggesting that these two kinases, with oncogenic potential, have different roles in cell cycle progression.

## REFERENCES

1. Bischoff, J.R., et al. 1998. A homologue of *Drosophila* Aurora kinase is oncogenic and amplified in human colorectal cancers. *EMBO J.* 17: 3052-3065.
2. Zhou, H., et al. 1998. Tumour amplified kinase STK15/BTAK induces centrosome amplification, aneuploidy and transformation. *Nat. Genet.* 20: 189-193.
3. Kimura, M., et al. 1998. Identification and characterization of STK12/Aik2: a human gene related to Aurora of *Drosophila* and yeast IPL1. *Cytogenet. Cell Genet.* 82: 147-152.
4. Shindo, M., et al. 1998. cDNA cloning, expression, subcellular localization, and chromosomal assignment of mammalian aurora homologues, Aurora-related kinase (ARK) 1 and 2. *Biochem. Biophys. Res. Commun.* 244: 285-292.
5. Farruggio, D.C., et al. 1999. Cdc20 associates with the kinase Aurora2/Aik. *Proc. Natl. Acad. Sci. USA* 96: 7306-7311.
6. Giet, R. and Prigent, C. 1999. Aurora/Ipl1p-related kinases, a new oncogenic family of mitotic serine-threonine kinases. *J. Cell Sci.* 112: 3591-3601.

## CHROMOSOMAL LOCATION

Genetic locus: STK6 (human) mapping to 20q13.2.

## PRODUCT

ARK-1 (h2): 293 Lysate represents a lysate of human ARK-1 transfected 293 cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

ARK-1 (h2): 293 Lysate is suitable as a Western Blotting positive control for human reactive ARK-1 antibodies. Recommended use: 10-20 µl per lane.

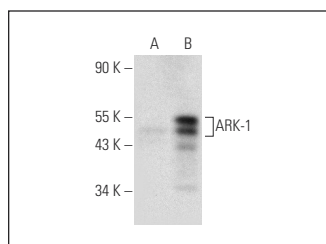
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-transfected 293 cells.

ARK-1 (C-1): sc-398814 is recommended as a positive control antibody for Western Blot analysis of enhanced human ARK-1 expression in ARK-1 transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



ARK-1 (C-1): sc-398814. Western blot analysis of ARK-1 expression in non-transfected: sc-110760 (A) and human ARK-1 transfected: sc-128042 (B) 293 whole cell lysates.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.