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Produktinformation



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Diagnostik & molekulare Diagnostik



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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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ARK5 (h): 293T Lysate: sc-173768

BACKGROUND

5'-AMP-activated protein kinase, known as AMPK, is a heterotrimeric complex that protects cells from stresses that cause ATP depletion by switching off ATP-consuming biosynthetic pathways. Activated AMPK phosphorylates and regulates hydroxymethylglutaryl-CoA reductase and acetyl-CoA carboxylase, which are key regulatory enzymes of sterol synthesis and fatty acid synthesis, respectively. The AMPK-related kinase 5 (ARK5) is a tumor progression-associated factor that is directly phosphorylated by Akt at Ser 600, which is in its regulatory domain. NDR2, a serine/threonine protein kinase, phosphorylates and activates ARK5 during Insulin-like growth factor (IGF)-I signaling in order to promote cell survival. This activation may be involved in the invasion of colorectal cancer cell lines. Furthermore, ARK5 is a transcriptional target of the Large-MAF family and may have a role in mediating the aggressiveness of c-Maf- and MafB-expressing myelomas.

REFERENCES

1. Suzuki, A., et al. 2003. ARK5 suppresses the cell death induced via inhibition of caspase 8 activation, but not by chemotherapeutic agents or UV irradiation. *Oncogene* 22: 6177-6182.
2. Suzuki, A., et al. 2004. ARK5 is a tumor invasion-associated factor downstream of Akt signaling. *Mol. Cell. Biol.* 24: 3526-3535.
3. Suzuki, A., et al. 2004. Regulation of caspase-6 and FLIP by the AMPK family member ARK5. *Oncogene* 23: 7067-7075.
4. Fisher, J.S., et al. 2005. Muscle contractions, AICAR, and insulin cause phosphorylation of an AMPK-related kinase. *Am. J. Physiol. Endocrinol. Metab.* 289: E986-E992.
5. Suzuki, A., et al. 2005. ARK5 is transcriptionally regulated by the Large-MAF family and mediates IGF-1-induced cell invasion in multiple myeloma: ARK5 as a new molecular determinant of malignant multiple myeloma. *Oncogene* 24: 6936-6944.
6. Suzuki, A., et al. 2005. Involvement of transforming growth factor- β 1 signaling in hypoxia-induced tolerance to glucose starvation. *J. Biol. Chem.* 280: 31557-31563.
7. Morito, N., et al. 2006. Overexpression of c-Maf contributes to T-cell lymphoma in both mice and human. *Cancer Res.* 66: 812-819.
8. Suzuki, A., et al. 2006. NDR2 acts as the upstream kinase of ARK5 during insulin-like growth factor-1 signaling. *J. Biol. Chem.* 281: 13915-13921.
9. Suzuki, A. and Esumi, H. 2006. AMPK in the cancer research field: tumor progression by ARK5. *Seikagaku* 78: 392-403.

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.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: NUAK1 (human) mapping to 12q23.3.

PRODUCT

ARK5 (h): 293T Lysate represents a lysate of human ARK5 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

ARK5 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive ARK5 antibodies. Recommended use: 10-20 μ l per lane.

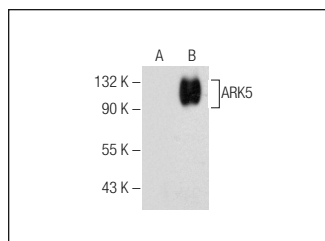
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

ARK5 (A-9): sc-271827 is recommended as a positive control antibody for Western Blot analysis of enhanced human ARK5 expression in ARK5 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

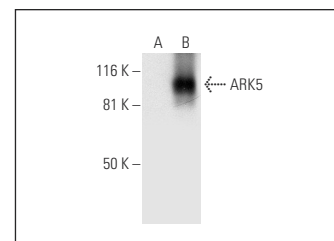
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



ARK5 (A-9): sc-271827. Western blot analysis of ARK5 expression in non-transfected: sc-117752 (A) and human ARK5 transfected: sc-173768 (B) 293T whole cell lysates.



ARK5 (H-12): sc-393459. Western blot analysis of ARK5 expression in non-transfected: sc-117752 (A) and human ARK5 transfected: sc-173768 (B) 293T whole cell lysates.

RESEARCH USE

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