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AKAP 7 (h): 293T Lysate: sc-174003

BACKGROUND

The type II cAMP-protein kinase (PKA) is a multifunctional kinase with a broad range of substrates. Specificity of PKA signaling is thought to be mediated by the compartmentalization of the kinase to specific sites within the cell. To maintain this specific localization, the regulatory (R) subunits (RI and RII) of PKA interact with specific R-anchoring proteins designated AKAPs (A-kinase anchoring proteins). AKAP 7 (A-kinase anchor protein 7), also known as AKAP18, is a 104 amino acid protein that belongs to the AKAP family. AKAP 7 is expressed in brain, heart, lung, pancreas and skeletal muscle. AKAP 7 binds PKA to the plasma membrane, and permits functional coupling to the L-type calcium channel. Four isoforms exist due to alternative splicing events. It has been suggested that the γ isoform binds RI and may be responsible for positioning PKA via RI and/or RII to regulate PKA-mediated gene transcription in both somatic cells and oocytes.

REFERENCES

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5. Brown, R.L., et al. 2003. AKAP7 γ is a nuclear RI-binding AKAP. *Biochem. Biophys. Res. Commun.* 306: 394-401.
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8. McSorley, T., et al. 2006. Spatial organisation of AKAP18 and PDE4 isoforms in renal collecting duct principal cells. *Eur. J. Cell Biol.* 85: 673-678.
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CHROMOSOMAL LOCATION

Genetic locus: AKAP7 (human) mapping to 6q23.2.

PRODUCT

AKAP 7 (h): 293T Lysate represents a lysate of human AKAP 7 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

AKAP 7 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive AKAP 7 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.

STORAGE

Store at -20 $^{\circ}$ 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.