SANTA CRUZ BIOTECHNOLOGY, INC.

AKAP 149/121 (6): sc-135824

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 R subunit (RII) of PKA interacts with specific RII-anchoring proteins. This family of proteins has been designated A-kinase anchoring proteins (AKAP). Members of this family, including MAP2 (microtubule-associated protein 2), neuronally expressed AKAP 79 and AKAP 150, and the DNA binding AKAP 95, display differential tissue specificity and localization. AKAP 149, the human homolog of mouse and rat AKAP 121, is a splice variant of S-AKAP 84 and may be involved in the phosphorylation-dependent regulation of RNA processing.

REFERENCES

1. Scott, J.D., et al. 1990. Type II regulatory subunit dimerization determines the subcellular localization of the cAMP-dependent protein kinase. J. Biol. Chem. 265: 21561-21566.
2. Carr, D.W., et al. 1992. Localization of the cAMP-dependent protein kinase to the postsynaptic densities by A-kinase anchoring proteins. Characterization of AKAP 79. J. Biol. Chem. 267: 16816-16823.
3. Coghlan, V.M., et al. 1993. A-kinase anchoring proteins: a key to selective activation of cAMP-responsive events? Mol. Cell. Biochem. 127: 309-319.
4. Coghlan, V.M., et al. 1994. Cloning and characterization of AKAP 95, a nuclear protein that associates with the regulatory subunit of type II cAMP-dependent protein kinase. J. Biol. Chem. 269: 7658-7665.
5. Coghlan, V.M., et al. 1995. Association of protein kinase A and protein phosphatase 2B with a common anchoring protein. Science 267: 108-111.
6. Lester, L.B., et al. 1996. Cloning and characterization of a novel A-kinase anchoring protein. AKAP 220, association with testicular peroxisomes. J. Biol. Chem. 271: 9460-9465.
7. Trendelenburg, G., et al. 1996. Molecular characterization of AKAP149, a novel A kinase anchor protein with a KH domain. Biochem. Biophys. Res. Commun. 225: 313-319.

CHROMOSOMAL LOCATION

Genetic locus: AKAP1 (human) mapping to 17q22; Akap1 (mouse) mapping to 11 C.

SOURCE

AKAP 149/121 (6) is a mouse monoclonal antibody raised against amino acids 66-212 of AKAP 149 of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

AKAP 149/121 (6) is recommended for detection of AKAP 149 of human origin and AKAP 121 of mouse and rat 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for AKAP 149 siRNA (h): sc-40301, AKAP 121 siRNA (m): sc-40302, AKAP 149 shRNA Plasmid (h): sc-40301-SH, AKAP 121 shRNA Plasmid (m): sc-40302-SH, AKAP 149 shRNA (h) Lentiviral Particles: sc-40301-V and AKAP 121 shRNA (m) Lentiviral Particles: sc-40302-V.

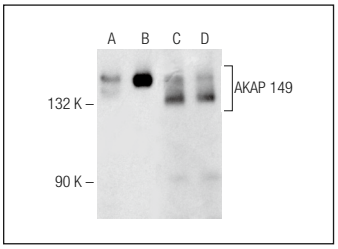
Molecular Weight of human AKAP 149: 149 kDa.

Molecular Weight of mouse and rat AKAP 121: 121 kDa.

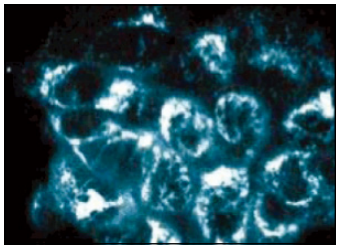
Molecular Weight of S-AKAP 84 isoform: 84 kDa.

Positive Controls: PC-3 cell lysate: sc-2220, AKAP 121 (m): 293T Lysate: sc-178271 or MCF7 whole cell lysate: sc-2206.

DATA



AKAP 149/121 (6): sc-135824. Western blot analysis of AKAP 149 expression in non-transfected 293T: sc-117752 (**A**), mouse AKAP 149 transfected 293T: sc-178271 (**B**), PC-3 (**C**) and MCF7 (**D**) whole cell lysates.



AKAP 149/121 (6): sc-135824. Immunofluorescence staining of A-431 cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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