

AKAP 149/121 (C-20): sc-6439

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.

CHROMOSOMAL LOCATION

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

SOURCE

AKAP 149/121 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AKAP 149 of human 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-6439 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AKAP 149/121 (C-20) 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)], 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).

AKAP 149/121 (C-20) is also recommended for detection of AKAP 149 in additional species, including equine, canine, bovine and porcine.

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.

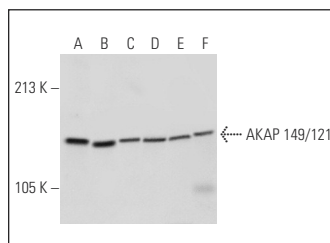
Molecular Weight of S-AKAP 84 isoform: 84 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, HUV-EC-C whole cell lysate: sc-364180 or HeLa whole cell lysate: sc-2200.

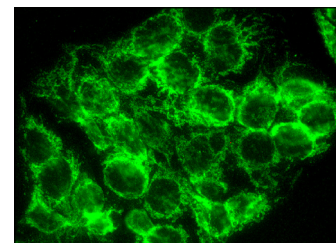
RESEARCH USE

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

DATA



AKAP 149/121 (C-20): sc-6439. Western blot analysis of AKAP 149/121 expression in HeLa (A), MCF7 (B), HUV-EC-C (C), HEK293 (D), NIH/3T3 (E) and COLO 320DM (F) whole cell lysates.



AKAP 149/121 (C-20): sc-6439. Immunofluorescence staining of formalin-fixed HepG2 cells showing mitochondrial localization.

SELECT PRODUCT CITATIONS

- Cardone, L., et al. 2004. Mitochondrial AKAP121 binds and targets protein tyrosine phosphatase D1, a novel positive regulator of src signaling. *Mol. Cell. Biol.* 24: 4613-4626.
- Livigni, A., et al. 2006. Mitochondrial AKAP121 links cAMP and src signaling to oxidative metabolism. *Mol. Biol. Cell* 17: 263-271.
- Dyson, M.T., et al. 2008. Mitochondrial A-kinase anchoring protein 121 binds type II protein kinase A and enhances steroidogenic acute regulatory protein-mediated steroidogenesis in MA-10 mouse leydig tumor cells. *Biol. Reprod.* 78: 267-277.
- Carlucci, A., et al. 2008. Proteolysis of AKAP121 regulates mitochondrial activity during cellular hypoxia and brain ischaemia. *EMBO J.* 27: 1073-1084.
- Bénard, G., et al. 2012. Mitochondrial CB₁ receptors regulate neuronal energy metabolism. *Nat. Neurosci.* 15: 558-564.

STORAGE

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

PROTOCOLS

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



Try **AKAP 149 (B-10): sc-377450** or **AKAP 149/121 (6): sc-135824**, our highly recommended monoclonal alternatives to AKAP 149/121 (C-20).