

# AKAP 150 (N-19): sc-6446

## 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 220, may play a role in cAMP-responsive peroxisomal events by targeting type II PKA.

## 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.

## CHROMOSOMAL LOCATION

Genetic locus: Akap5 (mouse) mapping to 12 C3.

## SOURCE

AKAP 150 (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of AKAP 150 of rat 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-6446 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

AKAP 150 (N-19) is recommended for detection of AKAP 150 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for AKAP 150 siRNA (m): sc-29659, AKAP 150 shRNA Plasmid (m): sc-29659-SH and AKAP 150 shRNA (m) Lentiviral Particles: sc-29659-V.

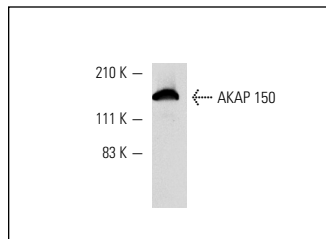
Molecular Weight of AKAP 150: 150 kDa.

Positive Controls: mouse brain extract: sc-2253 or NIH/3T3 whole cell lysate: sc-2210.

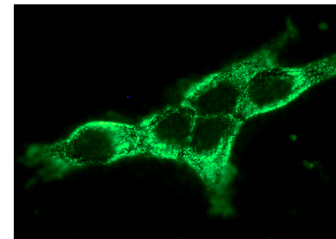
## STORAGE

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

## DATA



AKAP 150 (N-19): sc-6446. Western blot analysis of AKAP 150 expression in mouse brain extract.



AKAP 150 (N-19): sc-6446. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Lilly, S.M., et al. 2005. Synaptic and subcellular localization of A-kinase anchoring protein 150 in rat hippocampal CA1 pyramidal cells: Co-localization with excitatory synaptic markers. *Neuroscience* 134: 155-163.
2. Ostroveanu, A., et al. 2007. A-kinase anchoring protein 150 in the mouse brain is concentrated in areas involved in learning and memory. *Brain Res.* 1145: 97-107.
3. Nijholt, I.M., et al. 2008. Neuronal AKAP150 coordinates PKA and Epac-mediated PKB/Akt phosphorylation. *Cell. Signal.* 20: 1715-1724.
4. Weisenhaus, M., et al. 2010. Mutations in AKAP5 disrupt dendritic signaling complexes and lead to electrophysiological and behavioral phenotypes in mice. *PLoS ONE* 5: e10325.
5. Lazarevic, V., et al. 2011. Extensive remodeling of the presynaptic cytomatrix upon homeostatic adaptation to network activity silencing. *J. Neurosci.* 31: 10189-10200.
6. Rankovic, V., et al. 2011. Modulation of calcium-dependent inactivation of L-type Ca<sup>2+</sup> channels via  $\beta$ -adrenergic signaling in thalamocortical relay neurons. *PLoS ONE* 6: e27474.

## 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) or our catalog for detailed protocols and support products.

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Try **AKAP 150 (E-1): sc-377055**, our highly recommended monoclonal alternative to AKAP 150 (N-19).