

# AKAP 95 (R-20): sc-6447

## 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. Evidence suggests that AKAP 79 and AKAP 150 are both capable of anchoring PKA to postsynaptic densities (PSD), which are a network of proteins located on the internal surfaces of excitatory synapses.

## REFERENCES

1. 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.
2. Coghlan, V.M., et al. 1995. Association of protein kinase A and protein phosphatase 2B with a common anchoring protein. *Science* 267: 108-111.
3. 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.
4. Collas, P., et al. 1999. The A-kinase-anchoring protein AKAP95 is a multivalent protein with a key role in chromatin condensation at mitosis. *J. Cell Biol.* 147: 1167-1180.
5. Arsenijevic, T., et al. 2004. A novel partner for D-type cyclins: protein kinase A-anchoring protein AKAP95. *Biochem. J.* 378: 673-679.
6. Kamada, S., et al. 2005. A-kinase-anchoring protein 95 functions as a potential carrier for the nuclear translocation of active caspase 3 through an enzyme-substrate-like association. *Mol. Cell. Biol.* 25: 9469-9477.

## CHROMOSOMAL LOCATION

Genetic locus: AKAP8 (human) mapping to 19q13.12; Akap8 (mouse) mapping to 17 B1.

## SOURCE

AKAP 95 (R-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of AKAP 95 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-6447 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

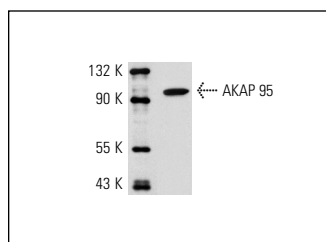
AKAP 95 (R-20) is recommended for detection of AKAP 95 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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 95 siRNA (h): sc-29662, AKAP 95 siRNA (m): sc-29663, AKAP 95 shRNA Plasmid (h): sc-29662-SH, AKAP 95 shRNA Plasmid (m): sc-29663-SH, AKAP 95 shRNA (h) Lentiviral Particles: sc-29662-V and AKAP 95 shRNA (m) Lentiviral Particles: sc-29663-V.

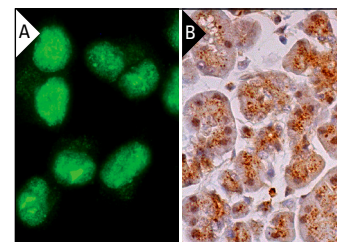
Molecular Weight of AKAP 95: 95 kDa.

Positive Controls: 3611-RF whole cell lysate: sc-2215.

## DATA



AKAP 95 (R-20): sc-6447. Western blot analysis of AKAP 95 expression in 3611-RF whole cell lysate.



AKAP 95 (R-20): sc-6447. Immunofluorescence staining of methanol-fixed 3611-RF cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing nuclear and cytoplasmic staining of exocrine glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Orellana, S.A., et al. 2003. Ezrin distribution is abnormal in principal cells from a murine model of autosomal recessive polycystic kidney disease. *Pediatr. Res.* 54: 406-412.

## 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 95 (F-11): sc-390335**, our highly recommended monoclonal alternative to AKAP 95 (R-20).