

AKAP 150 (R-300): sc-10765

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. 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 (R-300) is a rabbit polyclonal antibody raised against amino acids 267-478 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.

RESEARCH USE

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

APPLICATIONS

AKAP 150 (R-300) 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) 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.

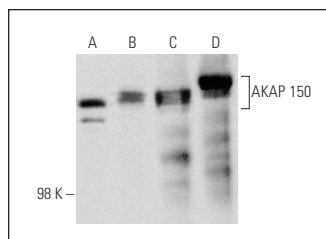
Molecular Weight of AKAP 150: 150 kDa.

Positive Controls: mouse brain extract: sc-2253, rat brain extract: sc-2392 or rat cerebellum extract: sc-2398.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AKAP 150 (R-300): sc-10765. Western blot analysis of AKAP 150 expression in C6 whole cell lysate (A) and rat cerebellum (B), rat brain (C) and mouse brain (D) tissue extracts.

SELECT PRODUCT CITATIONS

1. Por, E.D., et al. 2010. PP2B/calciueurin-mediated desensitization of TRPV1 does not require AKAP150. *Biochem. J.* 432: 549-556.
2. Chaudhury, S., et al. 2011. AKAP150-mediated TRPV1 sensitization is disrupted by calcium/calmodulin. *Mol. Pain* 7: 34.
3. Jeske, N.A., et al. 2011. A-kinase anchoring protein 150 mediates transient receptor potential family V type 1 sensitivity to phosphatidylinositol-4,5-bisphosphate. *J. Neurosci.* 31: 8681-8688.
4. Makani, V., et al. 2013. Annexin A1 complex mediates oxytocin vesicle transport. *J. Neuroendocrinol.* 25: 1241-1254.

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.

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Try **AKAP 150 (E-1): sc-377055**, our highly recommended monoclonal alternative to AKAP 150 (R-300).