

AKAP 12 (22): sc-293056



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 250 (also designated gravin) interacts with β 2-adrenergic receptors to form dynamic complexes with protein kinases and phosphatases.

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.

CHROMOSOMAL LOCATION

Genetic locus: Akap12 (mouse) mapping to 10 A1.

SOURCE

AKAP 12 (22) is a mouse monoclonal antibody raised against amino acids 48-192 of AKAP 12 rat origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

AKAP 12 (22) is available conjugated to agarose (sc-293056 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-293056 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-293056 PE), fluorescein (sc-293056 FITC), Alexa Fluor[®] 488 (sc-293056 AF488), Alexa Fluor[®] 594 (sc-293056 AF594) or Alexa Fluor[®] 647 (sc-293056 AF647), 200 μ g/ml, for IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-293056 AF680) or Alexa Fluor[®] 790 (sc-293056 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

AKAP 12 (22) is recommended for detection of AKAP 12 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); not recommended for Immunoprecipitation.

Suitable for use as control antibody for AKAP 12 siRNA (m): sc-44761, AKAP 12 shRNA Plasmid (m): sc-44761-SH and AKAP 12 shRNA (m) Lentiviral Particles: sc-44761-V.

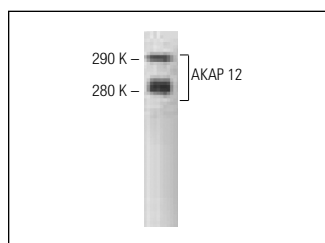
Molecular Weight of AKAP 12 isoforms: 287-305 kDa.

Positive Controls: rat brain extract: sc-2392.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



AKAP 12 (22): sc-293056. Western blot analysis of AKAP 12 expression in rat brain tissue extract.

STORAGE

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

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.