

AKAP 6 (R-18): sc-46059

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). AKAP 6 binds to type II regulatory subunits of PKA and targets them to the sarcoplasmic reticulum (SR) and the nuclear membrane. It localizes to the nuclear membrane and SR in heart muscle. AKAP 6 is highly expressed in cardiac muscle, skeletal muscle and to a lesser extent in brain.

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. Bers, D.M. 2004. Macromolecular complexes regulating cardiac Ryanodine receptor function. *J. Mol. Cell. Cardiol.* 37: 417-429.
5. Carlisle Michel, J.J., et al. 2004. PKA-phosphorylation of PDE4D3 facilitates recruitment of the mAKAP signalling complex. *Biochem. J.* 381: 587-592.
6. Pare, G.C., et al. 2005. Nesprin-1 α contributes to the targeting of mAKAP to the cardiac myocyte nuclear envelope. *Exp. Cell Res.* 303: 388-399.

CHROMOSOMAL LOCATION

Genetic locus: AKAP6 (human) mapping to 14q12; Akap6 (mouse) mapping to 12 C1.

SOURCE

AKAP 6 (R-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKAP 6 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-46059 P, (100 μ g 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.

PROTOCOLS

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

APPLICATIONS

AKAP 6 (R-18) is recommended for detection of AKAP 6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 6 (R-18) is also recommended for detection of AKAP 6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AKAP 6 siRNA (h): sc-45630, AKAP 6 siRNA (m): sc-45631, AKAP 6 shRNA Plasmid (h): sc-45630-SH, AKAP 6 shRNA Plasmid (m): sc-45631-SH, AKAP 6 shRNA (h) Lentiviral Particles: sc-45630-V and AKAP 6 shRNA (m) Lentiviral Particles: sc-45631-V.

Molecular Weight of AKAP 6: 80 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237, IMR-32 cell lysate: sc-2409 or SJRH30 cell lysate: sc-2287.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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