SANTA CRUZ BIOTECHNOLOGY, INC.

AKAP 95 (S-14): sc-161326

SANTA CRUZ BIOTECHNOLOGY

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. The family of RII-anchoring proteins has been designated A-kinase anchoring proteins (AKAP). AKAP 95, also known as AKAP 8, is a nuclear matrix protein predominantly expressed in liver, heart, pancreas, kidney and skeletal muscle. During mitosis, AKAP 95 is recruited to the chromosomes and plays an essential role in mitotic progression. Characteristic of its family, AKAP 95 participates in PKA signaling through an interaction with the RII regulatory subunit. In addition, AKAP 95 forms a complex with HA95 and HDAC3 and is required for the deacetylation of Histone H3 in mitosis.

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 AKAP 95 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 AKAP 95. 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.
7. Jungmann, R.A. and Kiryukhina, O. 2005. Cyclic AMP and AKAP-mediated targeting of protein kinase A regulates lactate dehydrogenase subunit A mRNA stability. J. Biol. Chem. 280: 25170-25177.

CHROMOSOMAL LOCATION

Genetic locus: AKAP8 (human) mapping to 19p13.12; Akap8 (mouse) mapping to 17 B1.

SOURCE

AKAP 95 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKAP 95 of human 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-161326 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AKAP 95 (S-14) is recommended for detection of AKAP 95 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); non cross-reactive with other AKAP family members.

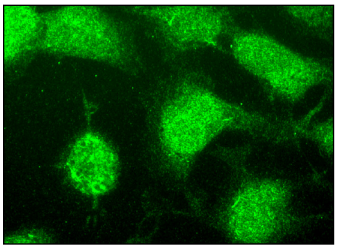
AKAP 95 (S-14) is also recommended for detection of AKAP 95 in additional species, including equine, canine, bovine, porcine and avian.

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: HeLa nuclear extract: sc-2120.

DATA



AKAP 95 (S-14): sc-161326. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear and cytoplasmic localization.

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 or our catalog for detailed protocols and support products.