

AKAP 8L (B-6): sc-376338

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 8, also known as AKAP 95, is a nuclear matrix protein predominantly expressed in liver, heart, pancreas, kidney and skeletal muscle. During mitosis, AKAP 8 is recruited to the chromosomes and plays an essential role in mitotic progression. AKAP 8L (AKAP 8-like), also known as HA95 (homologous to AKAP 95 protein), HAP95 (helicase A-binding protein 95), NAKAP or NAKAP95 (neighbor of AKAP 95), is also a nuclear matrix protein and shares 61% homology and 30% identity with AKAP 8. In addition, AKAP 8L forms a complex with AKAP 8 and HDAC3 and is required for the deacetylation of Histone H3 in mitosis.

REFERENCES

- Coghlan, V.M., et al. 1993. A-kinase anchoring proteins: a key to selective activation of cAMP-responsive events? *Mol. Cell. Biochem.* 127-128: 309-319.
- 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.
- Orstavik, S., et al. 2000. Identification, cloning and characterization of a novel nuclear protein, HA95, homologous to A-kinase anchoring protein 95. *Biol. Cell* 92: 27-37.
- Westberg, C., et al. 2000. A novel shuttle protein binds to RNA helicase A and activates the retroviral constitutive transport element. *J. Biol. Chem.* 275: 21396-21401.
- Seki, N., et al. 2000. cDNA cloning of a novel human gene NAKAP95, neighbor of A-kinase anchoring protein 95 (AKAP95) on chromosome 19p13.11-p13.12 region. *J. Hum. Genet.* 45: 31-37.

CHROMOSOMAL LOCATION

Genetic locus: AKAP8L (human) mapping to 19p13.12; Akap8l (mouse) mapping to 17 B1.

SOURCE

AKAP 8L (B-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 617-647 at the C-terminus of AKAP 8L of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-376338 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

AKAP 8L (B-6) is recommended for detection of AKAP 8L of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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 8L siRNA (h): sc-97872, AKAP 8L siRNA (m): sc-140978, AKAP 8L shRNA Plasmid (h): sc-97872-SH, AKAP 8L shRNA Plasmid (m): sc-140978-SH, AKAP 8L shRNA (h) Lentiviral Particles: sc-97872-V and AKAP 8L shRNA (m) Lentiviral Particles: sc-140978-V.

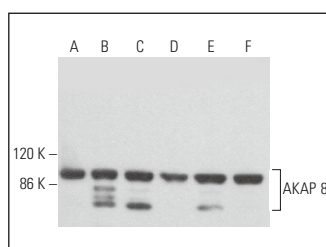
Molecular Weight of AKAP 8L: 100 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa whole cell lysate: sc-2200.

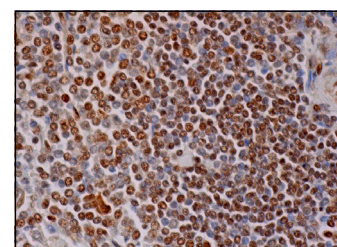
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGλ BP-HRP: sc-516132 or m-IgGλ BP-HRP (Cruz Marker): sc-516132-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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGλ BP-FITC: sc-516185 or m-IgGλ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGλ BP-HRP: sc-516132 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



AKAP 8L (B-6): sc-376338. Western blot analysis of AKAP 8L expression in HeLa (A), Jurkat (B), K-562 (C), PC-3 (D), HEL 92.1.7 (E) and Caco-2 (F) whole cell lysates. Detection reagent used: m-IgGλ BP-HRP (Cruz Marker): sc-516132-CM.



AKAP 8L (B-6): sc-376338. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing nuclear staining of cells in white pulp and cells in red pulp.

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.