

AKAP 13 (R-19): sc-9336

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 13, also known as Brx (breast cancer nuclear receptor-binding auxiliary protein), Lbc (lymphoid blast crisis oncogene), HA-3 or Ht31 (human thyroid-anchoring protein 31), functions as a cAMP-dependent scaffold anchor for PKA and also has Rho-GEF activity. It is known to regulate TLR2 signaling, NFκB activation, protein kinase D activation and participate in Actin stress fiber formation. Seven isoforms exist for AKAP 13 and, depending on the isoform, it localizes to the cytoplasm, nucleus or cell membrane.

REFERENCES

1. Baisamy, L., et al. 2005. Leucine zipper-mediated homo-oligomerization regulates the Rho-GEF activity of AKAP-Lbc. *J. Biol. Chem.* 280: 15405-15412.
2. Lewis, T.E., et al. 2005. Tissue transglutaminase interacts with protein kinase A anchor protein 13 in prostate cancer. *Urol. Oncol.* 23: 407-412.
3. Kino, T., et al. 2006. Rho family guanine nucleotide exchange factor Brx couples extracellular signals to the glucocorticoid signaling system. *J. Biol. Chem.* 281: 9118-9126.
4. Hearn-Stokes, R., et al. 2006. Expression of the proto-oncoprotein breast cancer nuclear receptor auxiliary factor (Brx) is altered in eutopic endometrium of women with endometriosis. *Fertil. Steril.* 85: 63-70.
5. Sterpetti, P., et al. 2006. Cell proliferation and drug resistance in hepatocellular carcinoma are modulated by Rho GTPase signals. *Am. J. Physiol. Gastrointest. Liver Physiol.* 290: 624-632.

CHROMOSOMAL LOCATION

Genetic locus: AKAP13 (human) mapping to 15q25.3; Akap13 (mouse) mapping to 7 D2.

SOURCE

AKAP 13 (R-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKAP 13 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-9336 P, (100 µg 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.

APPLICATIONS

AKAP 13 (R-19) is recommended for detection of AKAP 13 of mouse, rat and human 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).

AKAP 13 (R-19) is also recommended for detection of AKAP 13 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for AKAP 13 siRNA (h): sc-41721, AKAP 13 siRNA (m): sc-41722, AKAP 13 shRNA Plasmid (h): sc-41721-SH, AKAP 13 shRNA Plasmid (m): sc-41722-SH, AKAP 13 shRNA (h) Lentiviral Particles: sc-41721-V and AKAP 13 shRNA (m) Lentiviral Particles: sc-41722-V.

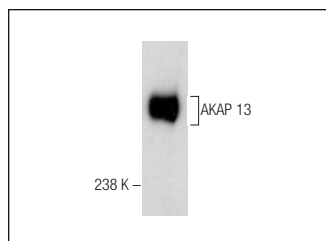
Molecular Weight of AKAP 13: 309 kDa.

Positive Controls: human heart extract sc-363763.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



AKAP 13 (R-19): sc-9336. Western blot analysis of AKAP 13 expression in human heart tissue extract.

RESEARCH USE

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

MONOS
Satisfaction
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Try **AKAP 13 (A-1): sc-393557** or **AKAP 13 (A-3): sc-393953**, our highly recommended monoclonal alternatives to AKAP 13 (R-19).