

AKAP 13 (A-3): sc-393953

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, NF κ B 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

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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.
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7. Shibolet, O., et al. 2007. AKAP 13, a RhoA GTPase-specific guanine exchange factor, is a novel regulator of TLR2 signaling. *J. Biol. Chem.* 282: 35308-35317.
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CHROMOSOMAL LOCATION

Genetic locus: AKAP13 (human) mapping to 15q25.3.

SOURCE

AKAP 13 (A-3) is a mouse monoclonal antibody raised against amino acids 1-284 mapping at the N-terminus of AKAP 13 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

AKAP 13 (A-3) is recommended for detection of AKAP 13 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

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

Molecular Weight of AKAP 13: 309 kDa.

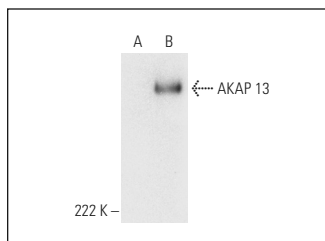
Positive Controls: AKAP 13 (h): 293T Lysate: sc-372397.

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 MarkerTM 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-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 13 (A-3): sc-393953. Western blot analysis of AKAP 13 expression in non-transfected: sc-117752 (A) and human AKAP 13 transfected: sc-372397 (B) 293T whole cell lysates.

STORAGE

Store at 4 $^{\circ}$ 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.