SANTA CRUZ BIOTECHNOLOGY, INC.

AKAP 82 (I-17): sc-66309

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AKAP (A-kinase anchoring proteins) is a family of proteins that interact with the R subunit of PKA to anchor it to specific sites within the cell in order to maintain the specificity of PKA signaling. Members of this family display differential tissue specificity and localization. AKAP 82, also known as PRKA4 (protein kinase A-anchoring protein 4), major sperm fibrous sheath protein or FSC1, is expressed in spermatid during spermiogenesis. AKAP 82 plays an important role in spermatid development, completing the fibrous sheath assembly. AKAP 82 has two binding sites for PKA, one specific for RIα and one that can bind either RIα or RIIα. AKAP 82 also binds to AKAP 3. These two proteins together make up most of the insoluble fibrous sheath. In AKAP 82 knockout spermatozoa, a significant reduction or loss of AKAP 3, RIIα, SP17 and GAPDS results. Abnormal sperm expression of AKAP 82 may be involved in asthenospermia.

REFERENCES

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RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: AKAP4 (human) mapping to Xp11.2; Akap4 (mouse) mapping to X A1.1.

SOURCE

AKAP 82 (I-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of AKAP 82 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-66309 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AKAP 82 (I-17) is recommended for detection of AKAP 82 of 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).

Suitable for use as control antibody for AKAP 82 siRNA (h): sc-61962.

Molecular Weight of AKAP 82: 82 kDa.

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.

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.