Technical Data Sheet

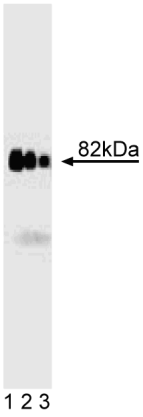
Purified Mouse Anti-AKAP82

Product Information

Material Number:	**611564**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	25/AKAP82
Immunogen:	Mouse AKAP82 aa. 555-675
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Mouse
Target MW:	82 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The cAMP-dependent Protein Kinase (PKA) is compartmentalized within the cell. To maintain the localization of PKA, the regulatory subunits interact with specific anchoring proteins. Several proteins have been identified as PKA anchoring proteins and form a family named AKAP (**A**-**K**inase **A**nchor **P**roteins). Fifteen of the AKAP proteins contain a consensus binding motif that allows interaction with the type II regulatory subunit (RII) of the PKA holoenzyme. In addition, three other AKAPs (D-AKAP1, D-AKAP2, and fsc1/AKAP82) can associate with the type I regulatory subunit (RI) of the PKA holoenzyme. AKAP82 was isolated as a component of the mouse sperm fibrous sheath. It is a dual specificity AKAP that contains an RII-binding domain (domain A; amino acids 219 to 232) and an RI-binding domain (domain B; amino acids 335-344). In mouse, pro-AKAP82 is synthesized as a 97 kDa precursor that is transported to the flagellum where proteolytic cleavage of the N-terminal 179 amino acids produces AKAP82. Assembly of AKAP82 into the fibrous sheath surrounding the axoneme of the sperm flagellum is thought to tether PKA close to the axoneme where it can regulate flagellar motility.



Western blot analysis of AKAP82 on rat testis lysate.
Lane 1: 1:5000; lane 2: 1:10000, lane 3: 1:20000 dilution of anti-AKAP82.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Store undiluted at -20° C.

Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Not Recommended

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

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Suggested Companion Products

Catalog Number	Name	Size	Clone
611472	Rat Testis Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Edwards AS, Scott JD. A-kinase anchoring proteins: protein kinase A and beyond. *Curr Opin Immunol.* 2000; 12(2):217-221.(Biology)

Fulcher KD, Mori C, Welch JE, O'Brien DA, Klapper DG, Eddy EM. Characterization of Fsc1 cDNA for a mouse sperm fibrous sheath component. *Biol Reprod.* 1995; 52(1):41-49.(Biology)

Miki K, Eddy EM. Identification of tethering domains for protein kinase A type Ialpha regulatory subunits on sperm fibrous sheath protein FSC1. *J Biol Chem.* 1998; 273(51):34384-34390.(Biology)

Turner RM, Johnson LR, Haig-Ladewig L, Gerton GL, Moss SB. An X-linked gene encodes a major human sperm fibrous sheath protein, hAKAP82. Genomic organization, protein kinase A-RII binding, and distribution of the precursor in the sperm tail. *J Biol Chem.* 1998; 273(48):32135-32141.(Biology)