

**AKAP4 Antibody**  
**Catalog # ASC11850****Specification**

---

**AKAP4 Antibody - Product Information**

Application	WB, IHC-P, IF, E
Primary Accession	<a href="#">Q5JQC9</a>
Other Accession	<a href="#">NP_003877</a> , <a href="#">21493037</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 94 kDa

Application Notes	<b>Observed: 100 kDa KDa</b> <b>AKAP4 antibody can be used for detection of AKAP4 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.</b>
-------------------	--

**AKAP4 Antibody - Additional Information**

Gene ID **8852**

**Target/Specificity**

AKAP4; AKAP4 antibody is human specific. At least three isoforms are known to exist; this antibody will detect the two longest isoforms.

**Reconstitution & Storage**

AKAP4 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

AKAP4 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**AKAP4 Antibody - Protein Information**

Name AKAP4 ([HGNC:374](#))

Synonyms AKAP82

**Function**

Major structural component of sperm fibrous sheath (PubMed:[9822690](http://www.uniprot.org/citations/9822690)). Plays a role in sperm motility (PubMed:[34415320](http://www.uniprot.org/citations/34415320), PubMed:[9822690](http://www.uniprot.org/citations/9822690)).

**Cellular Location**

Cell projection, cilium, flagellum. Note=Localizes to the principle piece of the sperm flagellum.

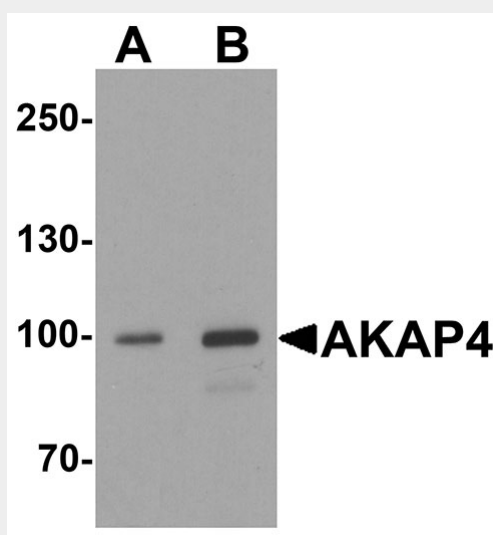
**Tissue Location**

Testis specific; only expressed in round spermatids.

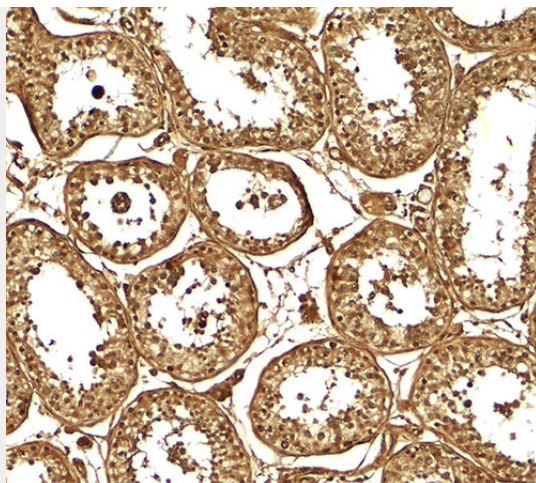
**AKAP4 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

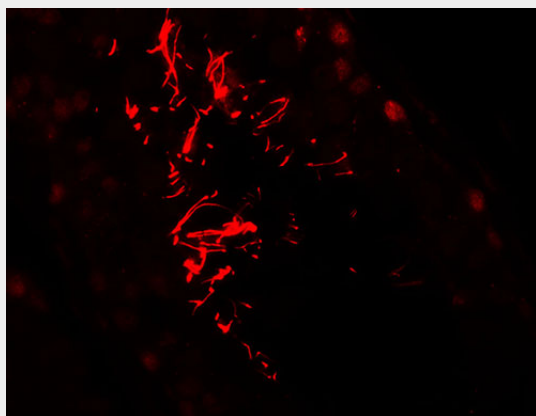
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**AKAP4 Antibody - Images**

Western blot analysis of AKAP4 in human testis tissue lysate with AKAP4 antibody at (A) 1 and (B) 2 µg/ml.



Immunohistochemistry of AKAP4 in human testis tissue with AKAP4 antibody at 5 µg/ml.



Immunofluorescence of AKAP4 in human testis tissue with AKAP4 antibody at 20 µg/ml.

### **AKAP4 Antibody - Background**

The A-kinase anchor proteins (AKAPs) are a group of structurally diverse proteins, which have the common function of binding to the regulatory subunit of protein kinase A (PKA) and confining the holoenzyme to discrete locations within the cell (1). AKAP4, also known as hAKAP82, is a major sperm fibrous sheath protein that localizes to the entire length of the flagellum of human sperm (2). It has been suggested that AKAP4 plays multiple roles in sperm motility and regulation of signal transduction pathways (2). AKAP4 has also been postulated to be a potential biomarker for breast cancer (3).

### **AKAP4 Antibody - References**

Carnegie GK, Means CK, and Scott JD. A-kinase anchoring proteins: from protein complexes to physiology and disease. *IUBMB* 2009; 61:394-406.  
Turner RM, Johnson LR, Haig-Ladewig L, et al. 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; 273:32135-41.  
Saini S, Jagadish N, Gupta A, et al. A novel cancer testis antigen, A-kinase anchor protein 4 (AKAP4) is a potential biomarker for breast cancer. *PLoS One* 2013; 8:e57095.