

**Anti-AKAP4
Mouse Monoclonal Antibody
(clone 7E10)**

Ref. 4BDX-1602S

Biomolecule

Anti-AKAP4 mouse monoclonal antibody

Clone

7E10

Size

20 µg in 20 µL

Formulation

Solution in PBS at 1 mg/mL

Storage

+4°C / -20°C

Immunogen

Peptide

Specificity

AKAP4

Cross-reactivity

Human, Horse, Bull, Mouse, Camel and Rat

Immunoglobulin type

Human AKAP4 specific mouse IgG

Isotype

IgG2a Kappa

Applications

WB, IF, IHC

• **Preparation**

This antibody was produced from a mouse hybridoma resulting from a mouse immunized with a peptide covering the C-terminus of AKAP4 protein sequence (Uniprot ref. Q5JQC9) which is 70% homologous between mammals.

• **Purity**

Mouse monoclonal antibodies 7E10 were purified by protein A/G affinity chromatography. Purity > 90%, as determined by SDS-PAGE and visualized by silver staining.

• **Concentration**

The measured concentration of the purified anti-AKAP4 antibodies was 1 mg/mL as determined using a total protein concentration assay.

• **Specificity**

Determined by its ability to recognize the prodomain of human AKAP4 protein. This monoclonal antibody (clone 7E10) only recognizes the proAKAP4 (110 kDa / 854 AA) and AKAP4 (82 kDa / 665 AA). The clone 7E10 reacts also with AKAP4 proteins from the horse, bull, mouse, and rat semen.

• **Storage**

Store at +4°C for short-term use (1-2 weeks) - Store at -20°C for long-term use.

• **Applications**

Recommended concentrations of use are:

Western-blot: 0.1 µg/mL

IHC / IF: 5 µg/mL

• **General information**

Human AKAP4 (A-Kinase Anchor Protein 4) protein is encoded by a single gene located on chromosome X. The proAKAP4 polypeptide is converted into mature AKAP4 by proteolytic cleavage of the amino-terminal prodomain made of 188 amino acids. AKAP4 and its precursor proAKAP4 are both major components of the fibrous sheath of the sperm flagellum. AKAP4 protein belongs to the family of A-kinase anchor proteins (AKAPs) all sharing a common function of binding to the regulatory subunit of protein kinase A (PKA) and confining the PKA holoenzyme to discrete locations within the cell. AKAP4 is also named AKAP-4, AKAP82 (A-Kinase Anchor Protein 82 kDa), PRKA4 (Protein Kinase Anchoring Protein 4), HI, CT99 (Cancer/Testis Antigen 99), FSC1 (Fibrous sheath component 1) or P82. AKAP4 plays a major role in flagellum formation, structuration, sperm motility, capacitation, and fertility.

• **Main References**

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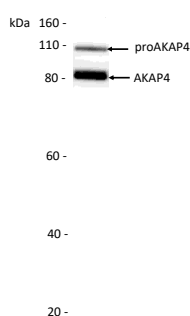
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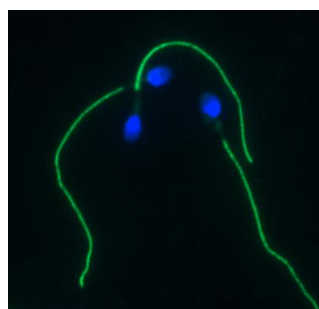
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• **Application examples**

The monoclonal antibody (clone 7E10) recognizes the full-length of AKAP4 called proAKAP4 (110 kDa / 854 AA) and the AKAP4 (82 kDa / 665 AA) but it does not recognize the prodomain of 188 aa.



Western blotting of human sperm protein extracts



Immunofluorescence of human spermatozoa



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