

Anti-ProAKAP4 Mouse Monoclonal Antibody (clone 6F12)

Ref. 4BDX-1701

Biomolecule

Anti-proAKAP4 mouse monoclonal antibody

Clone

6F12

Size

100 µg in 100 µL

Formulation

Solution in PBS at 1 mg/mL

Storage

+4°C / -20°C

Immunogen

Peptide

Specificity

AKAP4 prodomain

Cross-reactivity

Human, Horse, Bull, Mouse, Ram, Camel

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 prodomain of AKAP4 protein sequence (Uniprot ref. Q5JQC9) which is 70% homologous between mammals.

• **Purity**

Mouse monoclonal antibodies 6F12 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-proAKAP4 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 6F12) only recognizes the proAKAP4 (110 kDa / 854 AA), and the prodomain (21 kDa) and does not react with the AKAP4 (82 kDa / 665 AA). The clone 6F12 reacts also with proAKAP4 proteins from horse, bull, mouse, rat and ram 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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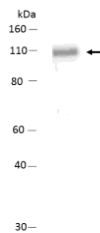
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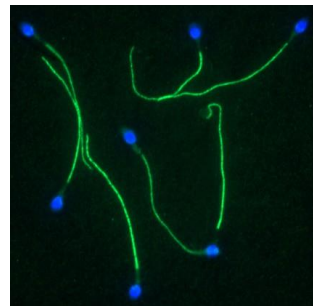
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• Application examples

The monoclonal antibody (clone 6F12) only recognizes the full-length of AKAP4 called proAKAP4 (110 kDa / 854 AA), the prodomain (21 kDa) and does not react with the AKAP4 (82 kDa / 665 AA).



Western-blotting of human sperm protein extracts



Immunofluorescence of human spermatozoa



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