

Anti-AKAP4 Mouse Monoclonal Antibody (clone 10F8)

Ref. 4BDX-1805

Biomolecule

Anti-AKAP4 mouse monoclonal antibody

Clone

10F8

Size

100 µg in 100 µL

Formulation

Solution in PBS at 1 mg/mL

Storage

+4°C / -20°C

Immunogen

Peptide

Specificity

AKAP4 C-terminus

Cross-reactivity

Dog, Rabbit, Pig, Ram, Cat, Goat

Immunoglobulin type

Human AKAP4 specific mouse IgG

Isotype

IgG2a Kappa

Applications

WB, IF, IHC, FCM, EM

• **Preparation**

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

• **Purity**

Mouse monoclonal antibodies 10F8 was 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 C-terminus of AKAP4 proteins. This monoclonal antibody (clone 10F8) recognizes both proAKAP4 (110 kDa / 854 AA) and the AKAP4 (82 kDa / 665 AA). This clone reacts also with AKAP4 proteins from dog, rabbit, pig, ram, cat, and goat 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, sperm motility, capacitation, and fecundation.



• Main References

Carracedo S, Loyens A, Eddarkaoui S, Serateyn D, Malo C, Skidmore L, Briand-Amirat L, Barbotin AL, Maurage CA, Delehedde M and Sergeant N (2020) The sperm specific proAKAP4 polypeptide exhibited conserved functions, localizations and metabolism among mammals. *Animal Reproduction Science*. Vol. 220 :106448 - P88.

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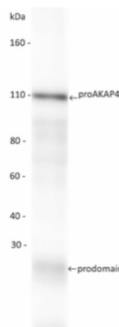
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Sergeant N, Briand-Amirat L, Bencharif D and Delehedde M (2019) The sperm specific protein proAKAP4 as an innovative marker to evaluate sperm quality and fertility. *Journal of Dairy & Veterinary Sciences*. Vol. 11:01-19.

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• More details

The monoclonal antibody (clone 10F8) recognizes both the full-length of AKAP4 called proAKAP4, (110 kDa / 854 AA) and the AKAP4 (82 kDa / 665 AA). This C-Terminus antibody does not recognize the prodomain of 21 kDa released after proAKAP4 conversion into AKAP4.



*Western blotting
of Human sperm extract*



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