

**Anti-AKAP4
Mouse Monoclonal Antibody
(clone 12A10)
Ref. 4BDX-2301**

Biomolecule

Anti-AKAP4 mouse
monoclonal antibody

Clone

12A10

Size

100 µg in 100 µL

Formulation

Solution in phosphate buffer
at 1 mg/mL

Storage

+4°C / -20°C

Immunogen

Peptide

Specificity

proAKAP4/AKAP4

Cross-reactivity

Mouse, Rat, Hamster,
Pig and Main Primates

Immunoglobulin type

Human AKAP4 specific
mouse IgG

Isotype

IgG2_a Kappa

Applications

WB, IF, IHC

• **Preparation**

This antibody was produced from a mouse hybridoma resulting from a mouse immunized with a peptide in the C-terminal region of human AKAP4 protein sequence (Uniprot ref. Q5JQC9) which is 80% homologous between mammals.

• **Purity**

Mouse monoclonal antibodies 12A10 were purified by protein A/G affinity chromatography. Purity > 90%, as determined by SDS-PAGE and visualized by Coomassie Blue staining.

• **Concentration**

The measured concentration of the purified anti-AKAP4 antibodies was 1mg/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 12A10) only recognizes the proAKAP4 (110 kDa / 854 AA) and AKAP4 (82 kDa / 665 AA). The clone 12A10 reacts also with AKAP4 proteins from rodent, pig, human, and main primate species.

• **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 sperm 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.



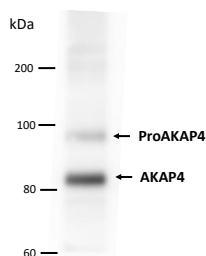
- **References**

Carracedo S, Briand-Amirat L, Dordas-Perpinyà M, Ramos Escuredo Y, Delcombel R, Sergeant N and Delehedde M (2022) ProAKAP4 protein marker: towards a functional approach to male fertility. *Animal Reproduction Science*. Vol.247(107074):1-20

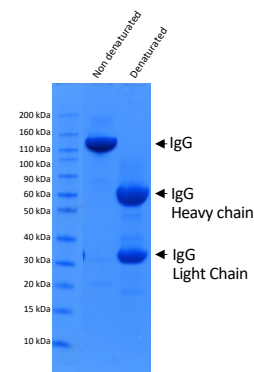
Delehedde M, Carracedo S, Selleslagh M, Eddarkaoui S, Amirat-Briand L and Sergeant N (2019) ProAKAP4 polypeptide as a biomarker of sperm functionality and male fertility disorders. *Int J Gynecol and Reprod Sci*. Vol. 2(1):13-19.

- **Application examples**

The monoclonal antibody (clone 12A10) 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 pig semen protein extracts



Antibody purity

TO PLACE AN ORDER



contact@4biodx.com



www.4biodx.com



(33) 680 223 199



SPQI S.A.S
82 rue Jeanne d'Arc, 59000 Lille, France

RCS Lille Metropole 820 961 514 – Code APE 7219Z VAT : FR 40 820 961 514 000 24