



Rabbit Anti-CATSPER4 antibody

SL6422R

Product Name:	CATSPER4
Chinese Name:	阳离子通道精子相关蛋白4抗体
Alias:	CTSR4_HUMAN; Cation channel sperm-associated protein 4; CatSper4; CatSper-4; cation channel, sperm-associated 4.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	57kDa
Cellular localization:	The cell membrane
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human CATSPER4:101-200/472
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	CatSper (cation channel, sperm associated proteins) are ion transport proteins located on the surface of sperm cells in the principal piece of the sperm tail. CatSper are vital to sperm motility, fertilization and cAMP-mediated calcium influx in sperm. There are four CatSper proteins in mammalian sperm, namely CatSper (or CatSper1), CatSper2, CatSper3 and CatSper4. CatSper proteins contain a single, six-transmembrane-spanning segment and exhibit the voltage-dependent Ca ²⁺ channel four-repeat structure. CatSper

proteins are believed to assemble into a heterotetrameric complex, forming an alkalization-activated Ca²⁺-selective channel. Mutations in any of the genes encoding CatSper family proteins can result in male infertility. CatSper3 plays an important role in the hyperactivated motility of sperm cells, a process that is required in the preparation of sperm for fertilization.

Function:

Voltage-gated calcium channel that plays a central role in calcium-dependent physiological responses essential for successful fertilization, such as sperm hyperactivation, acrosome reaction and chemotaxis towards the oocyte. Activated by extracellular progesterone and prostaglandins following the sequence: progesterone > PGF1-alpha = PGE1 > PGA1 > PGE2 >> PGD2. The primary effect of progesterone activation is to shift voltage dependence towards more physiological, negative membrane potentials; it is not mediated by metabotropic receptors and second messengers. Sperm capacitation enhances the effect of progesterone by providing additional negative shift. Also activated by the elevation of intracellular pH.

Subunit:

Heterotetramer; possibly composed of CATSPER1, CATSPER2, CATSPER3 and CATSPER4 (Potential). Component of the CatSper complex. Interacts with CATSPER1.

Subcellular Location:

Cell projection, cilium, flagellum membrane; Multi-pass membrane protein.
Note=Specifically located in the principal piece of sperm tail.

Tissue Specificity:

Testis-specific.

Similarity:

Belongs to the cation channel sperm-associated (TC 1.A.1.19) family.

SWISS:

Q7RTX7

Gene ID:

378807

Database links:

[Entrez Gene: 378807](#)Human

[Omim: 609121](#)Human

[SwissProt: Q7RTX7](#)Human

[Unigene: 123532](#)Human

	<p>Important Note:</p>
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This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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