

## Product datasheet for **TA328777**

### Catsper4 Rabbit Polyclonal Antibody

#### Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	WB: 1:200-1:2000
Reactivity:	Mouse, Rat
Host:	Rabbit
Clonality:	Polyclonal
Immunogen:	Peptide (C)NSYLGQKHYELFSTID, corresponding to amino acid residues 90-105 of mouse CatSper4. 1st extracellular loop.
Formulation:	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.05% NaN <sub>3</sub> .
Reconstitution Method:	Add 50 ul double distilled water (DDW) to the lyophilized powder.
Purification:	Affinity purified on immobilized antigen.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	cation channel, sperm associated 4
Database Link:	<a href="#">NP_808534</a> <a href="#">Entrez Gene 362623 Rat</a> <a href="#">Entrez Gene 329954 Mouse</a> <a href="#">Q8BVN3</a>



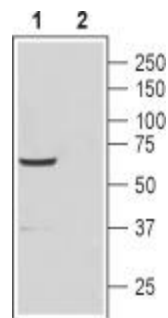
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**Background:**

During mammalian fertilization,  $\text{Ca}^{2+}$  signaling plays a central role in sperm capacitation and motility to the fusion between sperm and egg. Several  $\text{Ca}^{2+}$ -permeable ion channel proteins have been characterized in mammalian sperm. However, only the four mammalian CatSper members (CatSper 1-4) are restrictively expressed in the testis and are clearly shown to be required for male fertility. CatSper channels are named after the first putative cation channel of sperm. CatSper4 contains a single ion transport domain comprised of 6 transmembrane spanning regions, where the fourth transmembrane region resembles a voltage sensor and a pore forming region lies between transmembrane regions 5 and 6. The pore contains the consensus sequence TÅ?DÅ?W indicative of a probable  $\text{Ca}^{2+}$  selective channel. The four CatSper proteins are primarily localized to the plasma membrane of the distal portion of the sperm tail and presumably form a heterotetrameric, pH- and voltage-dependent  $\text{Ca}^{2+}$ -permeable channel. CatSper 4 is highly expressed in testis and expressed at low levels in placenta and lung. Male mice deficient in any of the four CatSper are completely sterile but exhibit no other apparent abnormality. The major phenotypes of the sperm are a lack of hyperactivated motility, a gradual loss of motility after isolation, and an inability to penetrate zona-intact eggs.

**Synonyms:**

MGC149223

**Product images:**


Western blot analysis of rat testis lysate: 1. Anti-CatSper4 (extracellular) antibody, (1:1000). 2. Anti-CatSper4 (extracellular) antibody preincubated with the control peptide antigen.