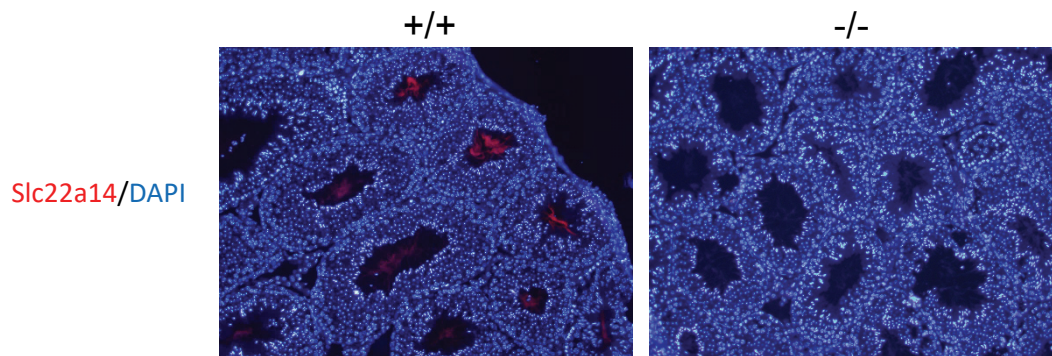


Supplementary information

### A critical role of solute carrier 22a14 in sperm motility and male fertility in mice

Shin-ya Maruyama, Momoe Ito, Yuusuke Ikami, Yu Okitsu, Chizuru Ito, Kiyotaka Toshimori, Wataru Fujii, and Keiichiro Yogo

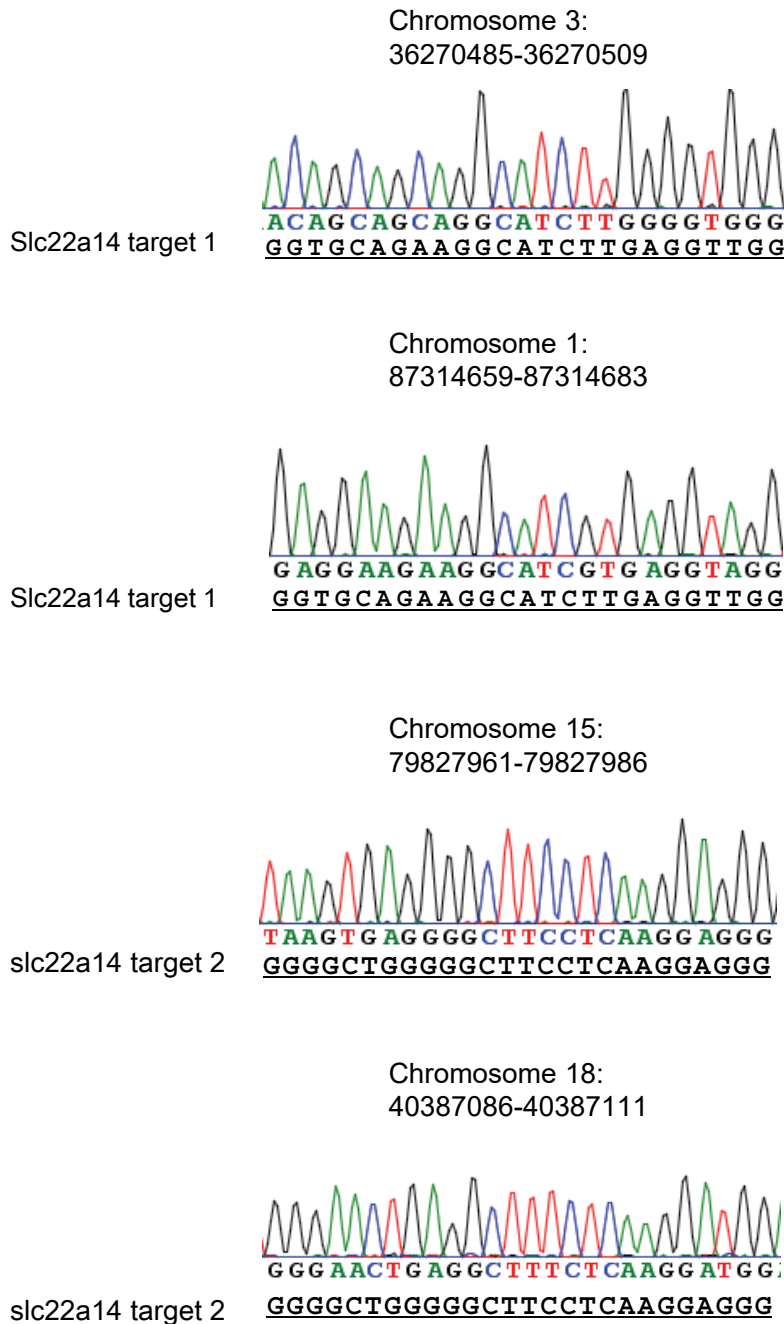
Supplementary Fig. S1



**Figure S1. Specificity of anti-Slc22a14 antibody.**

Immunohistochemical staining of wild-type (+/+) and *Slc22a14*-deficient (-/-) mouse testis using anti-Slc22a14 antibody (red). Nuclei were stained with 4',6-diamidino-2-phenylindole, dilactate (DAPI, blue).

Supplementary Fig. S2



**Figure S2. Sequence analysis of potential off target sites.**

Potential off-target sites for each target sequence (underlined) were searched with TagScan (<http://ccg.vital-it.ch/tagger/tagscan.html>). The two sites with the highest similarity were selected, the region was amplified by PCR and the sequences were analysed by direct sequence analysis. The chromosome number and region of the sites are indicated above the waveform data. There were no deletions or insertions in all sites.

## Supplementary Table S1

**Table S1. Primer sequences used in this study**

Gene	Primer pair	Primer sequence
<i>Slc22a14</i> (genotyping)	F1	5'-GCTTAGAGATGATTAGAGCAGGTAAAGAGAC-3'
	R1	5'-CCACTAAAGACCATTACTGCTACCATCTAC-3'
<i>Slc22a14</i> (RT-PCR)	F2	5'-ATCCTGACGCTCATGCTTGC-3'
	R2	5'-CAAGGTCATGTTGAGGAGGC-3'
<i>Gapdh</i>	F	5'-CAGATTCCAGGCCGAATGCG-3'
	R	5'-CTGGTTCACGAGACAGGTCC-3'

## Supplementary Movies

**Movie S1. Motility of wild-type spermatozoa.**

**Movie S2. Motility of *Slc22a14*<sup>-/-</sup> spermatozoa.**