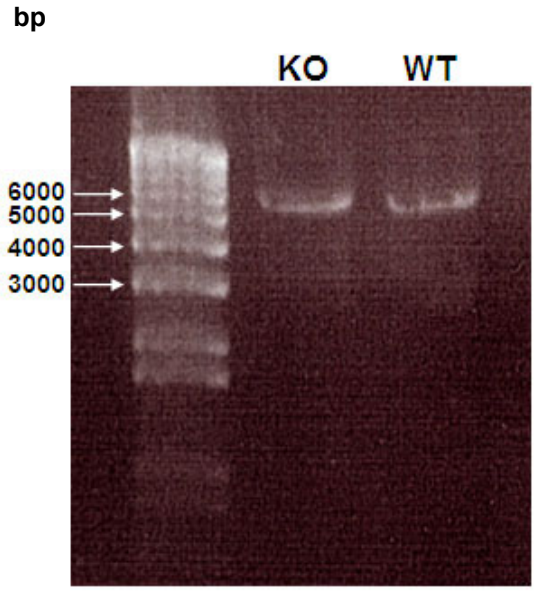
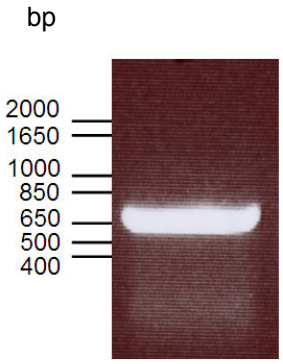
SUPPLEMENTARY INFORMATION

TRPM7 controls Mg^{2+} homeostasis in mammals

Lillia V. Ryazanova, Lusliany J. Rondon, Susanna Zierler, Zhixian Hu, Joanna Galli, Terry P. Yamaguchi, Andrzej Mazur, Andrea Fleig, and Alexey G. Ryazanov



Supplementary Figure S1: Analysis of TRPM6 expression in ES cells. Total RNA was isolated form wild type (WT) and TRPM7$^{\Delta kinase/\Delta kinase}$ (KO) ES cells using RNeasy Mini Kit. cDNA was generated using Superscript II Reverse Transcriptase (Invitrogen). Primers for amplification of TRPM6 from the cDNA were 5'-tgcaggtcaagaaatcctgg-3' and 5'-aatggtttgcccaaatccca-3'. Advantage 2 PCR Kit was used for the amplification and cycling parameters were the following: 95^{o}C – 30s, 68^{o}C – 6m repeated for 35 cycles. Expected length of the product was 6087 bp.



Supplementary Figure S2: Analysis of Trpm7 mRNA in Trpm7$^{\Delta kinse/\Delta kinase}$ ES cells.

Total RNA was isolated from TRPM7$^{\Delta kinase/\Delta kinase}$ (KO) ES cells using RNeasy Mini Kit. cDNA was generated using Superscript II Reverse Transcriptase (Invitrogen). Primers for amplification of TRPM7 from the cDNA were 5'-acggatcccagaaagctgtagtagaa-3' (anneals to exon 29) and 5'-acagtactaaaaccatgtcacaggat-3' (anneals to exon 39, reverse). Advantage 2 PCR Kit was used for the amplification and cycling parameters were the following: 95^{o}C – 30s, 55^{o}C – 1m, 68^{o}C-1m repeated for 5 cycles followed by 95^{o}C – 30sec, 60^{o}C – 1m, 68^{o}C – 1m repeated for 25 cycles. The PCR product shown in the figure was subcloned into TOPO-TA vector (Invitrogen) and then sequenced.