

Table S1. Primers used for investigating the splice variants.

Primer name	Sequence (5'-3')	Length (bp)
PrPyx(A)-F	GAAATTTTCTTCTGTGTCTTGCGG	487
PrPyx(B)-F	TAATCTGTTTATATTCGGTGGAGGC	468
PrPyx-R	CTTCAGCAACTTATGTAGCACGGAG	—
PrTRPM(A)-F	AAGCAAACCGAAACTTTCTTACGTC	569
PrTRPM(B)-F	AGTCTTATTTTACGTGTTCCCGCAT	512
PrTRPM-R	AACGCCCATCTCTCGTGAAGTAGTT	—
PrTRP γ -F	AATTGTGGATCAGCTATTTCAAGA	689
PrTRP γ -R	GACCGATGAGACGTGAAACTCG	

Table S2. Primers used for qPCR.

Primer name	Sequence (5'-3')
qPrIav-F	CGCCAGTTCGCTTCATCTTGC
qPrIav-R	GTGGTATTCGCTGTTGGTCTCTTG
qPrNan-F	AGGAGCGTGCGAGACATAAGC
qPrNan-R	TCAGCAGGCAGAGATGAAGGATTG
qPrNompC-F	GTGCTCATAACGCTCCTCATTGC
qPrNompC-R	CGCTCATCTGGTCTTGTCTCTGG
qPrPain-F	CGGGATCAAAGAGCCATCAAATCG
qPrPain-R	TGCGTAGTGTAATGCTGTGTTGTC
qPrPYX(A+B)-F	CGCCGAGGATTCTGATGAGGAG
qPrPYX(A+B)-R	TTCATTGTCTGCTTGTGCTGCTG
qPrTRPA1-F	CACGAGCAAAGAGCCCAAGAAG
qPrTRPA1-R	GGAGGACACAGAGCAGAGAAGG
qPrTRP γ (A+B)-F	CGGTTCTCTGTCTGGCTCTACTC
qPrTRP γ (A+B)-R	TGTGGTGCGGTGGCTTGC
qPrTRPL-F	CACAAGCATCCAGCACCATATAGC
qPrTRPL-R	CATTCATCGCAGCCGCATCG
qPrTRPM(A)-F	TGCGTGGTGCTGAGGAAGATG
qPrTRPM(A)-R	ATGCGTGGTGTTAGCGAGAGG
qPrTRPM(B)-F	CGTCACTGGGTATACCTACT
qPrTRPM(B)-R	CTTGCTTAGGCCACACCAAC
qPrTRPML-F	ACGGACATACACCAACTTGAGGAG
qPrTRPML-R	TTACGCTTTGCTCGCCATTCTC
QPrWtrw-1-F	CGTAAACTGCGAAGGCGGATTG
QPrWtrw-1-R	GCGGCTAAGTGTAATGCTGTAGAC
QPrWtrw-2-F	CCTGCTGAAGATGCTCCGAATATG
QPrWtrw-2-R	ATCTCCCTGCTCCCAGAGTTAAAG
qPrTRPA5-F	GATAACATCGCAACTCCGCTACAC
qPrTRPA5-R	GGGCACCCAGGCTTCTTCG
qPrTRP-F	TGAACCCGAATCACCATCCA
qPrTRP-S	CCTTTGCTTCCTCTGCGTTT
qPr-18s-F	ACAATTGGAGGGCAAGTCTG
qPr-18s-R	CACCGCGATAGGATTTTGAT

Table S3. Accession number of TRP channels identified in this study.

Gene name	Accession number
<i>ZnTRPA1</i>	XM_022083250.1
<i>ZnPain-1</i>	XM_022069106.1
<i>ZnPain-2</i>	XM_022072648.1
<i>ZnPain-3</i>	XM_022072708.1
<i>ZnPain-4</i>	XM_022065778.1
<i>ZnPain-5</i>	XM_022069064.1
<i>ZnPain-6</i>	XM_022069054.1
<i>ZnPain-7</i>	XM_022063669.1
<i>ZnPyx</i>	GenBank: KDR03815.1
<i>ZnWtrw</i>	XM_022057625.1
<i>ZnNompC</i>	XM_022059308.1
<i>ZnIav</i>	XR_002544018.1
<i>ZnNan</i>	XM_022086387.1
<i>ZnTRPM</i>	XM_022063775.1
<i>ZnPk2-1</i>	XM_022062720.1
<i>ZnPk2-2</i>	XM_022062967.1
<i>ZnTRPML</i>	XM_022068422.1
<i>ZnTRP</i>	XM_022057128.1
<i>ZnTRPL</i>	XM_022057105.1
<i>ZnTRPγ</i>	XM_022063395.1
<i>ZnBrv2</i>	XM_022087238.1
<i>ZnTRPA5</i>	XM_022085106.1
<i>BgTRPA1</i>	PSN57930.1
<i>BgPain-1</i>	PSN51663.1
<i>BgPain-2</i>	PSN47403.1
<i>BgPain-3</i>	PSN44088.1
<i>BgPain-4</i>	PSN50501.1
<i>BgPain-5</i>	PSN39524.1
<i>BgPain - 6</i>	PSN40730.1
<i>BgPain-7</i>	PSN28979.1
<i>BgPyx</i>	PSN45985.1
<i>BgWtrw</i>	PSN49738.1
<i>BgNompC</i>	PSN36722.1
<i>BgIav</i>	PSN51083.1
<i>BgNan</i>	PSN30164.1
<i>BgTRPM</i>	PSN39268.1
<i>BgPk2-1</i>	PSN36947.1

<i>BgPkd2-2</i>	PSN29497.1
<i>BgTRPML</i>	PSN35272.1
<i>BgTRP</i>	PSN38237.1
<i>BgTRPL</i>	PSN38242.1
<i>BgTRPγ</i>	PSN33020.1
<i>BgBrv3</i>	PSN31034.1
<i>BgTRPA5-1</i>	PSN47462.1
<i>BgTRPA5-2</i>	PSN47911.1
<i>NI TRPA1</i>	XM_022335028.1
<i>NI Pain</i>	XM_022340489.1
<i>NI Wtrw</i>	XM_022345460.1
<i>NI NompC</i>	XM_022330016.1
<i>NI lav</i>	XM_022330203.1
<i>NI Nan</i>	XM_022345641.1
<i>NI TRPM</i>	XM_022330672.1
<i>NI Pkd2</i>	XM_022329028.1
<i>NI TRPML</i>	XM_022336950.1
<i>NI TRP</i>	XM_022338105.1
<i>NI TRPL</i>	XM_022338103.1
<i>NI TRPγ</i>	XM_022349498.1
<i>DpTRPA1</i>	OWR50481.1
<i>Dp Pain</i>	OWR52996.1
<i>Dp Pyx</i>	OWR52289.1
<i>Dp Wtrw-1</i>	OWR46419.1
<i>Dp Wtrw-2</i>	OWR45696.1
<i>Dp NompC</i>	OWR50221.1
<i>Dp lav</i>	OWR48059.1
<i>Dp Nan</i>	KZ248770.1
<i>Dp TRPM</i>	OWR46589.1
<i>Dp TRPML</i>	OWR43618.1
<i>Dp TRP</i>	OWR42590.1
<i>Dp TRPL</i>	OWR42591.1
<i>Dp TRPγ</i>	OWR45522.1
<i>Dp TRPA5</i>	OWR54184.1
<i>MsTRPA1</i>	XM_030164000.1
<i>Ms Pain</i>	XM_030167736.1
<i>Ms Pyx</i>	XM_030171035.1
<i>Ms Wtrw-1</i>	XM_030165492.1
<i>Ms Wtrw-2</i>	XM_030165499.1
<i>Ms NompC</i>	XM_030165023.1

<i>MsIav</i>	XM_030175862.1
<i>MsNan</i>	XM_030173827.1
<i>MsTRPM</i>	XM_030174374.1
<i>MsTRPML</i>	XM_030178483.1
<i>MsTRP</i>	XM_030171785.1
<i>MsTRPL</i>	XM_030169886.1
<i>MsTRPγ</i>	XM_030177905.1
<i>MsTRPA5-1</i>	XM_030172372.1
<i>MsTRPA5-2</i>	XM_030172397.1
<i>PxTRPA1</i>	XM_013323649.1
<i>PxPain</i>	XM_013319882.1
<i>PxPyx</i>	XM_013315494.1
<i>PxWtrw-1</i>	XM_013310920.1
<i>PxWtrw-2</i>	XM_013310896.1
<i>PxNompC</i>	XM_013326120.1
<i>PxIav</i>	XM_013306586.1
<i>PxNan</i>	XM_013310965.1
<i>PxTRPM</i>	XM_013307087.1
<i>PxTRPML</i>	XM_013317138.1
<i>PxTRP</i>	XM_013316210.1
<i>PxTRPL</i>	XM_013316212.1
<i>PxTRPγ</i>	XM_013319481.1
<i>PxTRPA5</i>	XM_013327029.1
<i>PrTRPA1</i>	XM_022269136.1
<i>PrPain</i>	XM_022264961.1
<i>PrPyx</i>	XM_022260547.1
<i>PrWtrw-1</i>	XM_022263017.1
<i>PrWtrw-2</i>	XM_022263000.1
<i>PrNompC</i>	XM_022272967.1
<i>PrIav</i>	XM_022270177.1
<i>PrNan</i>	XM_022266197.1
<i>PrTRPM</i>	XM_022272780.1
<i>PrTRPML</i>	XM_022262542.1
<i>PrTRP</i>	XM_022260530.1
<i>PrTRPL</i>	XM_022259226.1
<i>PrTRPγ</i>	XM_022266966.1
<i>PrTRPA5</i>	XM_022269806.1