

**Supplementary Table-1.** Sequences of the primers used in this study

| Gene                    | Sequence 5'–3' (forward) | Sequence 5'–3' (reverse) |
|-------------------------|--------------------------|--------------------------|
| <i>ZnT1</i>             | CCCAAGGCATCTCCAAGGA      | AGCCCTGTTGTCTTCTGATTCC   |
| <i>ZnT2</i>             | CCAGTGTCCGAGCTGCCTT      | GATGGAGAAGAGGAAGGTGC     |
| <i>ZnT4</i>             | TTCCCACTCCCTGCCTTCAAATT  | AGCACACCAACACTTTGTACCA   |
| <i>ZnT5</i>             | GCATTGGTGTGATCGTATCC     | TGGCAGGCATCTTTAATCAG     |
| <i>ZnT7</i>             | TCTGTTCGGCAAGATTTTCAG    | ATCAAGCCTAGGCAGTTGCT     |
| <i>ZnT8</i>             | TGATCAAGCCACCAAGATGT     | CTTGAAGCTGTTGTGGCAGT     |
| <i>Zip1</i>             | CCCAAGGCATCTCCAAGGA      | AGCCCTGTTGTCTTCTGATTCC   |
| <i>Zip4</i>             | GTGCGCTTCTGCTGAATCTG     | CGACTGCTAGAGCCACGTAGAG   |
| <i>MT1</i>              | GAACTGCAAATGCACCTCCT     | ACTTGTCCGAGGCACCTTT      |
| <i>MT2</i>              | ACAGATGGATCCTGCTCCTG     | CACTTGTCCGAAGCCTCTTT     |
| <i>TRPV<sub>5</sub></i> | ATCTCTGGGCTTCTTCTGGA     | CTGTTGGAGGGAGTTGGATT     |
| <i>β-actin</i>          | AGGCCCTCTGAACCCTAAG      | CCAGAGGCATACAGGGACAA     |