

Supplementary information

Figure 31 The detection procedures and standard curves of (a) crude polyaccharides, (b) interpenes, (c) phenois and (b) proteins and (c) free animo acids. (a) Using glucose as the standard to detect crude polyaccharide, in the formula, *C1* is the concentration of the solution to be tested according to the standard curve (mg/L), *D1* is the dilution multiple, *V1* is the volume of the solution to be tested (L) and *V2* is the volume of the precipitation to be redissolved (L); (b) Using oleanolic acid as the standard to detect triterpenes, in the formula, *m* is the mass of triterpenes in water extract calculated according to the standard curve (mg) and *v* is the volume of water extract (L); (c) Using gallic acid as the standard to detect phenols, in the formula, *C3* is the concentration of the solution to be tested according to the standard curve (mg/mL), *D3* is the dilution multiple; (e) Using histidine as the standard to detect protein, in the formula, *C2* is the concentration of the solution to be tested according to the standard curve (mg/mL), *D2* is the dilution multiple; (e) Using histidine as the standard to detect free amino acid, in the formula, *C4* is the concentration of the solution to be tested according to the standard curve (mg/mL).

| Names of gene | Abbreviation | primer sequences (5'- 3') | Amplicon (bp) |
|---|------------------|---------------------------|------------------|
| Tyrosine Kinase receptor B | TrkB | F: CACGACGAACCTCTTGACTG | 146 |
| | | R: GACAATGCCAGAAGCGAGTTA | |
| cAMP-response element binding protein | CREB | F: CTACATAGTGAGATCCCTTA | 149 |
| | | R: ACAGCTACAGGAAGATAG | |
| Nuclear factor of kappa light polypeptide gene enhancer in B cells | ΝϜκΒ | F: GAGTTTGGGAAGGATTTG | 148 |
| | | R: GTTTCCAGGTCTGATTTC | |
| Serotonin receptor 1A | HTR-1A | F: CACTCACCTCTCACAGTATCCA | 119 |
| | | R: TTGCTCCTTACCTCCTCTACG | |
| Gamma-aminobutyric acid receptor A | GABAA | F: TGTTCTCAACGCAGTGATTCC | 199 |
| | | R: CCTCTTGTCTATCTCCGTCTGA | |
| Na+-K+-Cl- cotransporter 1 | NKCC1 | F: CAACTTTCAGGTGATGAG | 151 |
| | | R: GAAAGCTGGGTAGATATTG | |
| K+-Cl- cotransporter 2 | KCC2 | F: CTCTGATATTCCCTCTCTT | 152 |
| | | R: TAAGACTCCATCCATACTC | |
| Glyceraldehyde-3-phosphate | GAPDH | F: CAAGCTCATTTCCTGGTATG | 200 |
| dehydrogenase | (reference gene) | R: TTATTATGGGGGTCTGGGA | |