

Figure S1. The validation of three reference genes for *M. truncatula*. The stability of reference genes in different organs was analyzed by RefFinder (A), geNorm (B), BestKeeper (C) and NormFinder (D). The stability of reference genes in nodules was analyzed by RefFinder (E), geNorm (F), BestKeeper (G) and NormFinder (H). The stability of reference genes in transgenic *M. truncatula* was analyzed by RefFinder (I), geNorm (J), BestKeeper (K) and NormFinder (L).

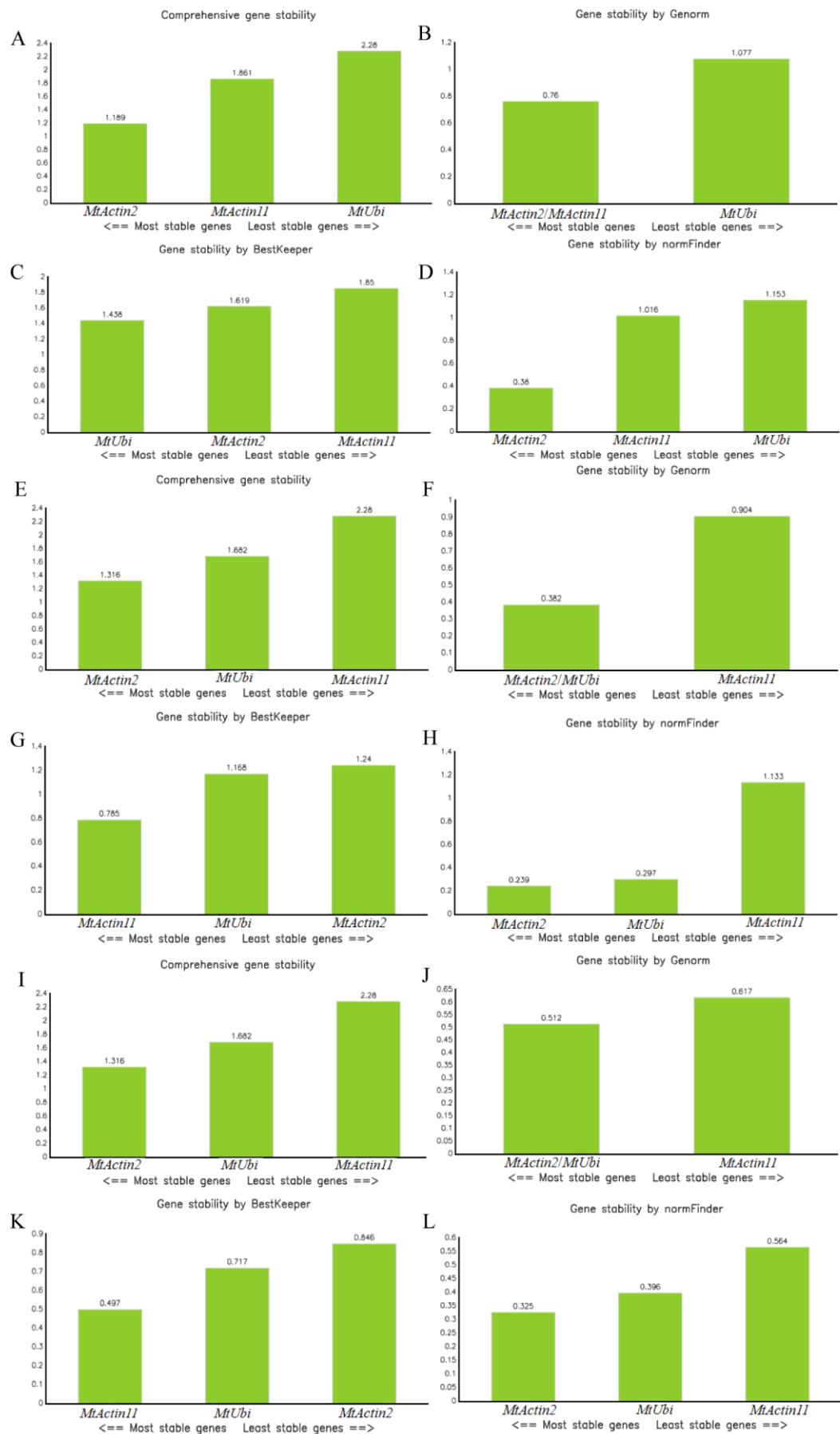


Table S1. List of primers used in this study.

| Primer name | primer sequence (5' -3') | |
|------------------------|--|--|
| MtWRP1-F | AGCCTCGAGATGCCATAAGAATTCC | Primers for <i>MtWRP1</i> |
| MtWRP1-R | AGCTCTAGATCATATCGATACCGAAGA | |
| MtWRP1-GFP-F | AGC <u>CTCGAG</u> ATGCCATAAGAATTCC | Primers for generating GFP fusion constructs |
| MtWRP1-GFP-R | AGCGG <u>ATCCT</u> TATCGATACCGAAGA | |
| MtWRP1-NTD-GFP-F | AGC <u>CTCGAG</u> ATGCCATAAGAATTCC | |
| MtWRP1-NTD-GFP-R | AGCGG <u>ATCCTTGAAATTCA</u> TTCTATTGT | |
| MtWRP1-CTD-GFP-F | AGC <u>CTCGAG</u> ATGGATTCTCAATCACAGATTG | |
| MtWRP1-CTD-GFP-R | AGCGG <u>ATCCT</u> TATCGATACCGAAGA | |
| <i>MtWRP1</i> -qRT-F | TGCAAGCAGCTCTTCAATCA | Primers for qRT-PCT |
| <i>MtWRP1</i> -qRT-R | ACACCCAAATGAGCTCTCAGCA | |
| <i>MtActin2</i> -qRT-F | TGGCATCACTCAGTACCTTCAGTG | |
| <i>MtActin2</i> -qRT-R | ACCCAAAGCATCAAATAAGTCAACC | |
| Tnt1-F2 | GTTGGATTGGTAGCCAACTTGT | Primers for <i>MtWRP1</i> mutants |

Table S2. Effects of MtWRP1 on plant growth and nodulation.

| Lines | Plant height (cm) | Shoot fresh weight (g·plant ⁻¹) | Root fresh weight (g·plant ⁻¹) | Total length (cm) | Tips | Nodule number per plant | Nodule weight (g·plant ⁻¹) |
|---------------|--------------------------|--|---|----------------------|-------------|----------------------------|---|
| <i>wrp1-1</i> | 3.901±0.118 ^b | 0.085±0.011 ^b | 0.158±0.017 ^a | 43. 966±5. 264 | 31.5±4.975 | 3.000±1.000 ^b | 0.003±0.001 ^b |
| <i>wrp1-2</i> | 4.120±0.124 ^b | 0.082±0.010 ^b | 0.139±0.018 ^a | 42. 344±1. 953 | 32±8.010 | 4.333±0.667 ^b | 0.004±0.001 ^b |
| R108 | 5.820±0.159 ^a | 0.180±0.023 ^a | 0.276±0.022 ^b | 55. 871±7. 074 | 52±2.000 | 8.500±0.646 ^a | 0.009±0.001 ^a |
| OE1 | 5.461±0.172 ^a | 0.163±0.006 ^a | 0.275±0.020 ^b | 53. 021±7. 412 | 42.25±7.825 | 9.250±0.854 ^a | 0.008±0.001 ^a |
| OE2 | 5.840±0.274 ^a | 0.186±0.021 ^a | 0.262±0.010 ^b | 56. 506±6. 399 | 43.25±2.462 | 10.000±1.826 ^a | 0.008±0.001 ^a |
| OE3 | 5.740±0.178 ^a | 0.167±0.018 ^a | 0.259±0.025 ^b | 52. 111±0. 742 | 56.75±9.499 | 11.001±1.414 ^a | 0.009±0.001 ^a |