**Table S1. Primers used for qRT-PCR**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene name | Locus | Direction | Primer sequence |
| ERFII-1 | *GK\_11A12* | forward | CTCCGTTGCCTACTACTGCC |
|  |  | reverse |  CCTCTGTAATGCCTCTTCTCCT |
| ARF19 | *AT1G19220* | forward | TCCAGTGCTGCAATCAGTTC |
|  |  | reverse | CCTCCACCATTCATGATTCC |
| CKX1 | *AT2G41510* | forward | ACAGAGGAAACAAGCCTACGAC |
|  |  | reverse | TGACTTTGCGAGTTGGATGG |
| ADC1 | *AT2G16500* | forward | AGAGGGATCTTATCGGATTT |
|  |  | reverse | TCTCATCTTTGCCCTTGC |
| DAR2 | *AT2G39830* | forward | AGCATGAGTTCTCTCTGTCAGG |
|  |  | reverse | CCAAAACGGATGGCATCGATAC |
| IQM3 | *At3G52870* | forward | GGAGGGTGATTGTTGACAATGG |
|  |  | reverse | AGGTTCACTGCGTTCTCTCTG |
| ACT2 | *At3G18780* | forward | GCCATCCAAGCTGTTCTCTC |
|  |  | reverse | GCTCGTAGTCAACAGCAACAA |



Figure S1. Effect of nanomaterial BV on the extension zone of taproot in *Arabidopsis*. CK: without nanomaterial BV treatment. BV was treated with BV about 200 µg·mL-1.

N=3