

Table S1 Primer sequences used in the present study

| Gene name | Direction | Primer sequence (5'-3') |
|------------------|-----------|---------------------------------|
| <i>AtEDT1</i> | Forward | 5'-ATGAGTTCGTCGTGGCGT-3' |
| | Reverse | 5'-GTCGTAAGAAGCCTGAGCAAT-3' |
| <i>AtEDT1-RT</i> | Forward | 5'-AGCAGCATTGAACATCGCAA-3' |
| | Reverse | 5'-TTGCCGTCGGTAAATTGCTT-3' |
| <i>MsACTIN2</i> | Forward | 5'-TCAATGTGCCTGCCATGTATGT-3' |
| | Reverse | 5'-ACTCACACCGTCACCAGAACATCC -3' |
| <i>MsRD2</i> | Forward | 5'-GCAGCTGTGGTTCTGGGGACC-3' |
| | Reverse | 5'-AGCAATACTCACCGACGCTTCCT-3' |
| <i>MsP5CS</i> | Forward | 5'-ATGGCGAACGCCGACCCTTGT-3' |
| | Reverse | 5'-CGGCAACAGCCATCTCGCGT-3' |
| <i>MsCOR47</i> | Forward | 5'-CGTGCTTACGGTGGCGGTGC-3' |
| | Reverse | 5'-TCCGGGTGGTGGTTCGGTGG-3' |
| <i>MsHSP23</i> | Forward | 5'-CATTCAACACCAACGCCATG-3' |
| | Reverse | 5'-CGGATCAAACACATCTGAGAGG-3' |

pCB2004-*AtEDT1*

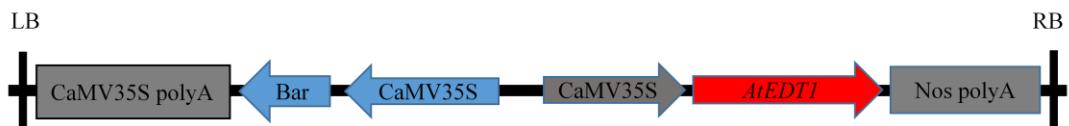


Figure S1. Schematic representation of the T-DNA region of binary vector pCB2004-AtEDT1 used in this study.

LB: left border, RB: right border, Bar: phosphinotricin acetyltransferase, CaMV35S: Cauliflower mosaic virus 35S promoter, Nos polyA: 3`-termination signal of nopaline synthase



Figure S2. Screening of the transgenic alfalfa plants by PCR. M, DNA molecular weight marker; 1-21, transgenic lines; P, plasmid carrying *AtEDT1* as positive control; CK1, wild-type control.

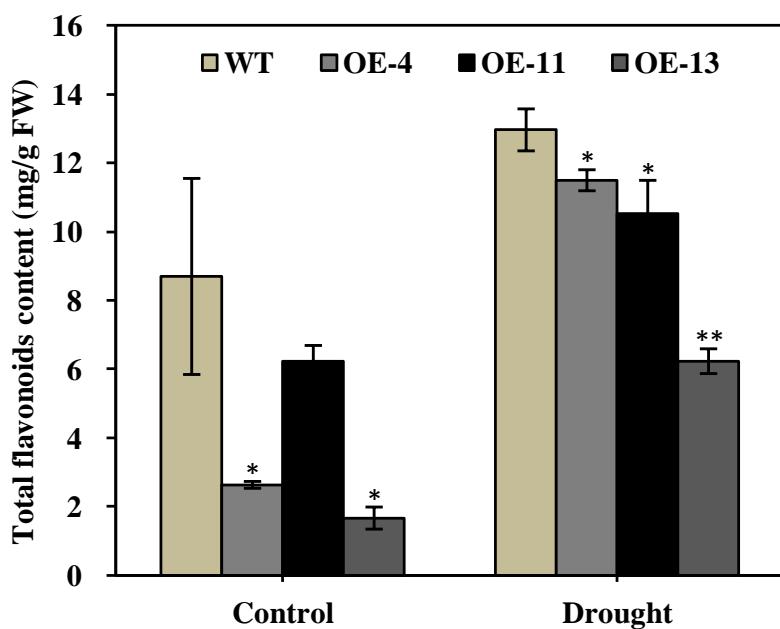


Figure S3. Total flavonoid content in wild-type and transgenic alfalfa plants with and without drought stress treatment.

Total flavonoid content from wild-type control and transgenic alfalfa plants with and without 20-day-drought stress treatment. Values are means \pm SD of three replicates ($*P < 0.05$, $**P < 0.01$).