**SUPPLEMENTAL TABLES**

| | starch in D1 | no starch in D1 | no starch in D1+D2 | starch in QC | starch in P1 | n |
|---|---|---|---|---|---|---|
| **Col-0** | 2.20 | 65.20 | 32.60 | 0.00 | 0.00 | 89 |
| ***cle40-2*** | 1.20 | 40.70 | 58.10 | 0.00 | 0.00 | 86 |
| **Col-0 + CLE40p** | 53.97 | 36.51 | 3.17 | 6.35 | 0.00 | 63 |
| **Col-0 + CLE40p$^{6Thr}$** | 31.82 | 53.03 | 10.61 | 4.55 | 0.00 | 66 |
| **Col-0 + CLV3p** | 66.67 | 19.44 | 9.72 | 4.17 | 0.00 | 72 |
| **Col-0 + CLV3p$^{6Thr}$** | 62.90 | 20.97 | 6.45 | 9.68 | 0.00 | 62 |

**Table S1. Quantification of distal root phenotypes after antagonistic peptide treatments.** Frequency in percent of *A. thaliana* roots carrying starch granules in the designated domains with or without peptide treatment. Seedlings were assayed by mPSPI staining 5 days after germination on medium ± 1 µM of peptide. P1 = proximal layer position one; QC = quiescent center position; D1 = distal layer position one; D2 = distal layer position two; n = number of main root tips analysed.

| Name | Sequence | 6A | 6T |
|---|---|---|---|
| **CLV3p** | RTVPSGPDPLHH | nd | ++ |
| **IDAp** | PIPPSAPGRKHN | ++ | ++ |
| **CLE40p** | RQVPTGSDPLHH | nd | ++ |
| **CLE27p** | RIVPSCPDPLHN | ++ | ++ |
| **CLE26p** | RKVPRGPDPIHN | ++ | + |
| **CLE1/4p** | RLSPGGPDPRHH | - | - |
| **CLE7p** | RFSPGGPDPQHH | - | - |
| **CLE45p** | RRVRRGSDPIHN | nd | (+) |

**Table S2. Summary of mutations and phenotypes.** Mutations at position six in CLE or IDA peptides has little effect in the context P[S/T]mP (where m is a mutation to A or T), but produce a peptide with reduced activity in the context [P/R]RmP. nd, not determined.