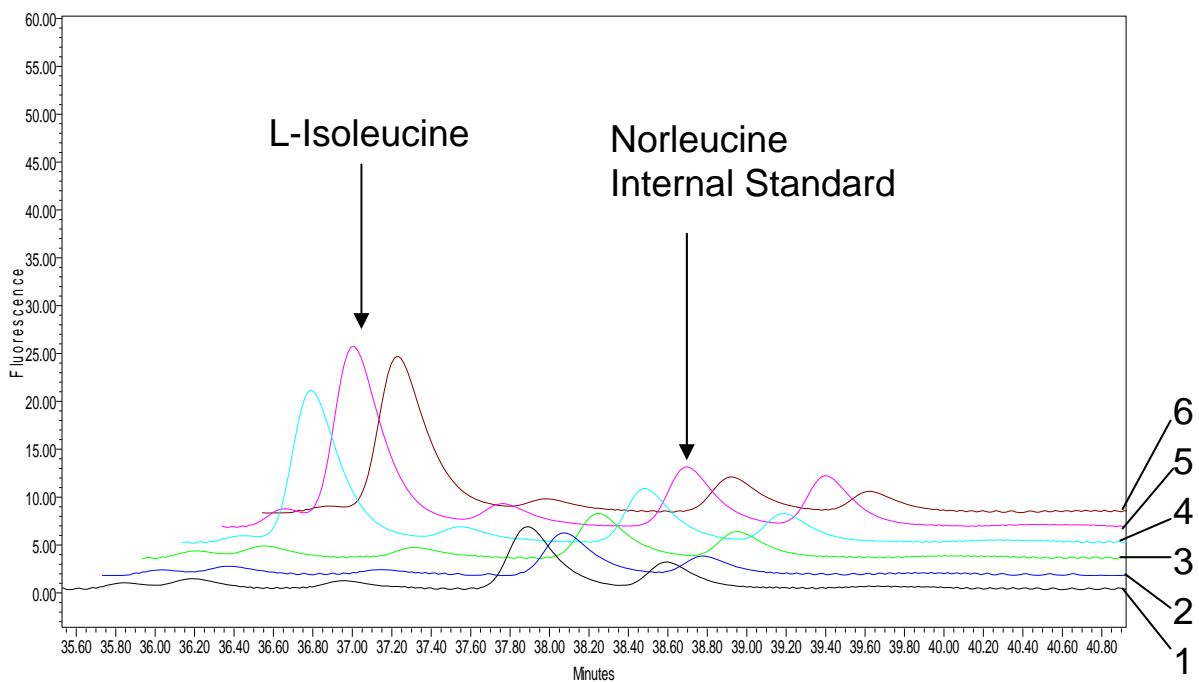
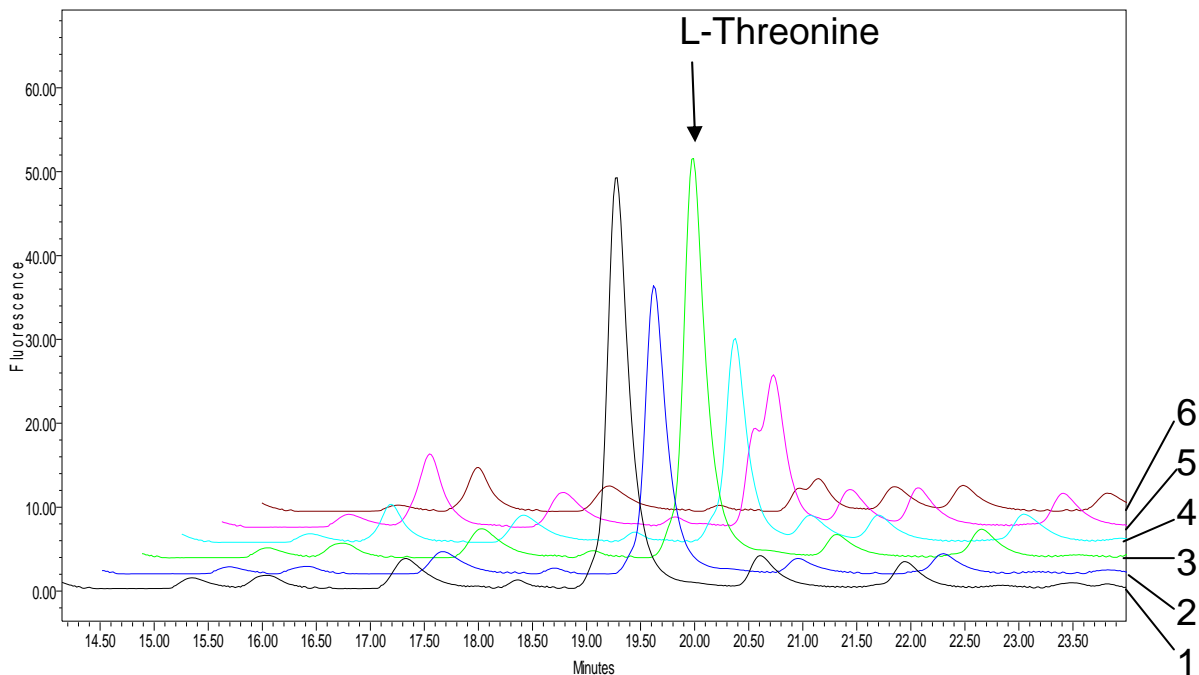


Supplemental Figure 11A. Seed-specific expression of P35S-*omr1* in a *tha2/tha2* genetic background increases isoleucine levels. Pollen from *tha2-1/tha2-1* P35S-*omr1*/P35S-*omr1* plants was transferred to *THA2/tha2-1* plants. Out of 12 phenotyped seeds, six showed greatly increased isoleucine, consistent with the expected *tha2-1/tha2-1* P35S-*omr1*/+ genotype in 50% of the progeny seeds.



Supplemental Figure 11B. Seed-specific expression of *P35S-omr1-7* in a *tha1-1/tha1-1* mutant background results in reduced Thr and increased Ile. Samples 1-3 are measurements of pooled seeds from *tha1-1/tha1-1* plants hand-pollinated with pollen from other *tha1-1/tha1-1* plants. Samples 4-6 are measurements of pooled seeds from *tha1-1/tha1-1* plants that were hand-pollinated with *tha1-1/tha1-1 P35S-omr1-7* pollen. Seed Ile is increased and seed Thr is decreased only when the pollen contributes the *P35S-omr1-7* transgene.