

Peroxidases identified in a subtractive cDNA library approach show tissue-specific transcript abundance and enzyme activity during seed germination of *Lepidium sativum*

Ada Linkies, Uta Schuster-Sherpa, Stefanie Tintelnot, Gerhard Leubner-Metzger, Kerstin Müller*

University of Freiburg, Faculty of Biology, Institute for Biology II, Botany / Plant Physiology, Schänzlestr. 1, D-79104 Freiburg, Germany, www.seedbiology.de

*To whom correspondence should be addressed: Kerstin Müller, phone: +49-761-2032669, email: kerstin.mueller@biologie.uni-freiburg.de

Journal of Experimental Botany 2009 (JEXBOT/2009/040063)

Table S1. Cress sequences of the subtractive library were deposited in the GenBank database and are available via the NCBI website (www.ncbi.nlm.nih.gov). Putative gene function was based on the highest BLAST hit, usually Arabidopsis otherwise the closest homologue is indicated next to the percentage nucleotide identity.

| GenBank accession number | Locus of closest homologue | Putative gene product function | Sequence similarity to Arabidopsis (%) if not indicated otherwise |
|--------------------------|----------------------------|---|---|
| GR972444 | AT1G01300 | aspartyl protease family | 87.6 |
| GR972418 | AT1G07890 | ascorbate peroxidase | 87.6 |
| GR972448 | AT1G14290 | acid phosphatase, SBH2 (sphingoid base hydroxylase 2) | 92.6 |
| GR972432 | AT1G32900 | starch synthase | 84.1 |
| GR972464 | AT1G64970 | gamma-tocopherol-methyltransferase | 90.7 <i>Brassica napus</i> |
| GR972445 | AT1G66200 | glutamine synthase | 89.2 |
| GR972417 | AT1G75040 | PR5 | 82.2 |
| GR972433 | AT1G79050 | DNA repair recA | 87.1 |
| GR972468 | AT2G18980 | putative peroxidase | 84.3 |
| GR972415 | AT2G33150 | KAT2 (also known as peroxisome defective 1) | 83.7 <i>Brassica napus</i> |
| GR972452 | AT2G34040 | API5 apoptosis inhibitory | 85.4 |
| GR972441 | AT2G34470 | UREG (urease accessory protein G) | 89.6 |
| GR972466 | AT2G36530 | phosphopyruvate hydratase | 89.6 <i>Brassica rapa</i> |
| GR972424 | AT3G12620 | PP2C family (protein phosphatase) | 91.6 |
| GR972456 | AT3G13920 | EIF4A1 (eukaryotic translation initiation factor) | 87.5 |
| GR972423 | AT3G16640 | TCTP (translationally controlled tumor) | 90.9 |
| GR972414 | AT3G20820 | leucine-rich repeat family | 86.4 |
| GR972460 | AT3G21720 | isocitrate lyase | 90.3 |
| GR972462 | AT3G46740 | TOC75-III | 88.2 |
| GR972446 | AT3G52960 | Peroxiredoxin Type 2 | 85.9 |
| GR972442 | AT3G53500 | nucleic acid binding | 89.1 |

| | | | |
|----------|-----------|--|--------------------------------------|
| GR972457 | AT3G55120 | TT5 (transparent testa) | 80.5 <i>Brassica rapa</i> |
| GR972449 | AT3G55430 | beta-1,3-glucanase | 88.1 |
| GR972421 | AT4G02890 | UBQ14 (ubiquitin) | 87.6 |
| GR972453 | AT4G05050 | UBQ11 (ubiquitin) | 89.2 |
| GR972469 | AT4G05320 | UBQ10 (ubiquitin) | 88.8 <i>Boechera divaricarpa</i> |
| GR972463 | AT4G13510 | ammonium transporter | 82.8 |
| GR972436 | AT4G21150 | ribophorin II family | 88.7 |
| GR972426 | AT4G31990 | cationic amino acid transporter | 80.8 |
| GR972434 | AT4G32410 | cellulose synthase | 86.6 |
| GR972425 | AT5G05750 | DNAJ | 87.7 |
| GR972431 | AT5G09440 | phosphate-responsive | 87.4 |
| Gr972422 | AT5G13930 | chalcone synthase (TT4) | 81.5 |
| GR972427 | AT5G14030 | TRAPB family (translocon-associated) | 89.7 |
| GR972440 | AT5G17920 | cobalmin-independent methionine synthase | 94.2 |
| GR972461 | AT5G19780 | tubulin alpha-5 | 95.6 |
| GR972467 | AT5G25350 | EIN3-binding F-box protein | 85.5 |
| GR972455 | AT5G37600 | glutamine synthase | 91.3 |
| GR972435 | AT5G37770 | calmodulin-related | 84.7 |
| GR972450 | AT5G48930 | anthranilate N-benzoyltransferase | 92.3 |
| GR972447 | AT5G57300 | methyltransferase | 90.3 |
| GR972454 | AT5G60390 | elongation factor | 96.5 |
| GR972451 | AT5G62700 | tubulin beta-3 | 79.5 |
| GR972439 | AT3G49910 | putative 60S ribosomal protein | 89.6 |
| GR972419 | AT4G09800 | S18.A ribosomal protein | 91.5 |
| GR972459 | AT2G18020 | 60S ribosomal protein L2 | 94.1 |

Fig S1 . Detailed germination kinetics of fresh *Arabidopsis* seeds at 24 °C in continuous light of the three peroxidase-SALKlines and the corresponding WT. Three times 50 seeds were used per line. Means +/- SE are shown. TR = testa rupture, ER = endosperm rupture.

