SUPPLEMENTAL DATA

SUPPLEMENTAL EXPERIMENTAL PROCEDURE

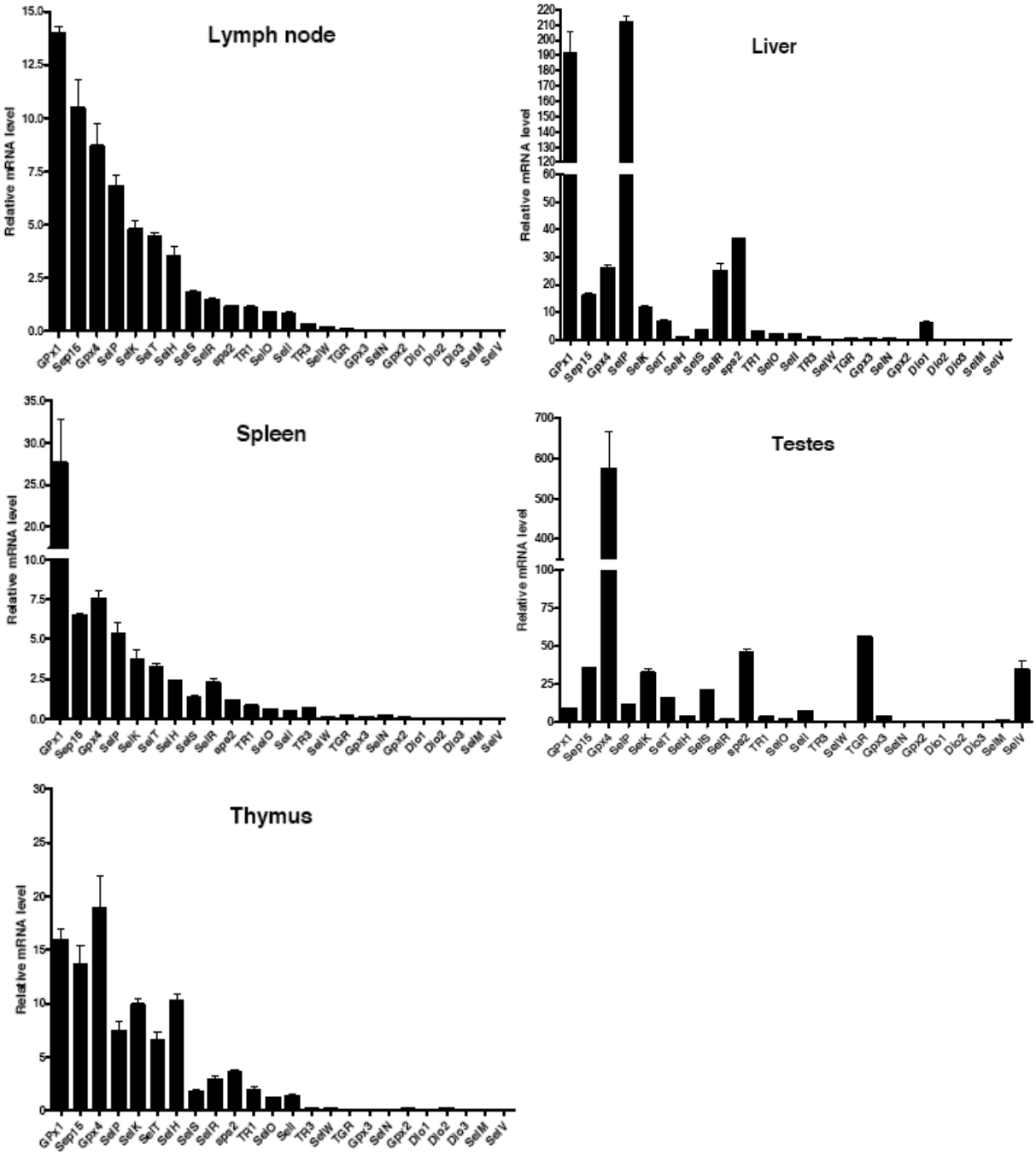
Quantitative Real-Time PCR- Total RNA was isolated from purified T cells of lymph node, spleen and thymus using Trizol (Invitrogen) according to manufacturer's instructions. Testes and liver total RNAs were used as controls. 2µg of RNA was used for first strand cDNA synthesis using an iScript cDNA Synthesis Kit as per manufacturer's instructions (Bio-Rad). To measure the levels of various selenoprotein gene expression this cDNA was used as a template for amplification by real-time PCR using a MyiQ^{TM} Real-Time PCR Detection System (Bio-Rad). Twenty ng of cDNA was utilized for the PCR reaction, using iQ^{TM} SYBR Green Supermix (Bio-Rad) and 500 nM of each primer, under the following conditions: Step 1: Initial denaturation at 95°C for 4 min. Step 2: 40 cycles each at 95°C for 10 sec, 56°C for 20 Sec and 72°C for 30 sec. Step 3: 59 cycles at 66°C for 10 sec and final hold up at 10°C. Selenoproteins analyzed (Supplemental Table 1) are shown in Supplemental Fig. 1 (S1) as relative mRNA level to Gusb (internal control).

Supplemental Table 1 Selenoprotein gene primers for assessing real-time PCR.

Gene	Forward Sequence	Reverse Sequence
Dio1	5'-AGGAACCATAGGCATTGGAA-3'	5'-CCAGAGAGCCAGATTCCTGT-3'
Dio2	5'- GACTCACCAGCCCATGTAAC-3'	5'- CGTGTGACTACATCCAACCA-3'
Dio3	5'- CAGAGTGGCACCATCATGTA-3'	5'- TCAGTCACTTGTCCCTTGGT-3'
Gpx1	5'-CAGGAGAATGGCAAGAATGA-3'	5'-GAAGGTAAAGAGCGGGTGAG-3'
Gpx2	5'- ATCAAACGGCTCCTCAAAGT-3'	5'- GGGACGATATTCAGGGAATG-3'
Gpx3	5'-CCCTTAGTGCATTCAGGCTT-3'	5'-GACCTTTACTGGGCAGATGG-3'
Gpx4	5'-GCAGGAGCCAGGAAGTAATC-3'	5'-GGCTGGACTTTCATCCATTT-3'
SelH	5'-CTACCTGTGCAAGTGAACCC-3'	5'-TGAGGCTCAGGAAATTTGAG-3'
SelI	5'-CCGTGTTTGCTCTTCACTTT-3'	5'-GCTGACATGTGATATTGGCA-3'
SelK	5'-TGGTGGATGAGGAAGGTAAA-3'	5'-ACAGAGCAATCCTTGTTTGG-3'
SelM	5'-GATTGGAACCGTCTTCGAG-3'	5'-GTGCTTCATCACCAGGTTGT-3'
SelN	5'- CCCTAGGTAGCCTTCTGTGC-3'	5'- ACAGGCTGAAGGGTAGCAGT-3'
SelO	5'-ATCGACTATGGACCCTTTGG-3'	5'-TTTCTGCAGATTCCACTTGC-3'
SelP	5'-ATCTTGGCAGCAGTAAGCCT-3'	5'-TCACTTGCTGTGGTGTCTCA-3'
SelR	5'-TCCAGTCACTCGAAGTACGC-3'	5'-CTTGCCACAGGACACCTTTA-3'
SelS	5'-CTTTGCGAGGAGGTGGTTAT-3'	5'-CCTTGCTAATGTCAGAGCGA-3'
SelT	5'-TGGTCTAAGCTGGAATCTGG-3'	5'-TTTCGGTGCTGATAGGTAGG-3'
SelV	5'-AATTCCCAAACCTTCTGGAG-3'	5'-GACTCATCCACAAAGCCATC-3'
SelW	5'-TAGAGGCAGGGTCCTGAAAG-3'	5'-AATCCATCTCTGGCCTGACT-3'
Sep15	5'-TGGAACACAGACAGTGTGGA-3'	5'-TGACCAATGTAAGCATGCAA-3'
Sps2	5'-GATAGTGCCGTGGTAGGAGA-3'	5'-CTCTGGAAACCACCATCTTG-3'
TR1	5'-CTACAGACCATTGCCTTGCT-3'	5'-ACCTCCTACCCACAAGATCC-3'
TGR	5'-CTGGAATATGGCTGTTGTGG-3'	5'-AGGTGTTGTTGTCTCTGCCA-3'
TR3	5'-TCACTGGAATTGGACTGGAT-3'	5'-ACACAGCCTTTCAGGAACTG-3'

SUPPLEMENTAL REFERENCES

Kryukov, G. V., Castellano, S., Novoselov, S. V., Lobanov, A. V., Zehtab, O., Guigó, R., and Gladyshev, V. N. (2003) *Science* **300**, 1439-1443



Supplemental Fig. S1. Profiling of selenoprotein gene expression in T cells. Selenoprotein gene expression in T cells purified from lymph node, spleen, thymus, liver and testes was verified by real-time PCR and is shown as relative mRNA level to GUSB (internal control).