

Supplemental Information

Title: Isothiocyanates induce UGT1A1 in humanized UGT1 mice in a CAR dependent fashion that is highly dependent upon oxidative stress

Short title: Cruciferous vegetables and activation of nuclear receptors

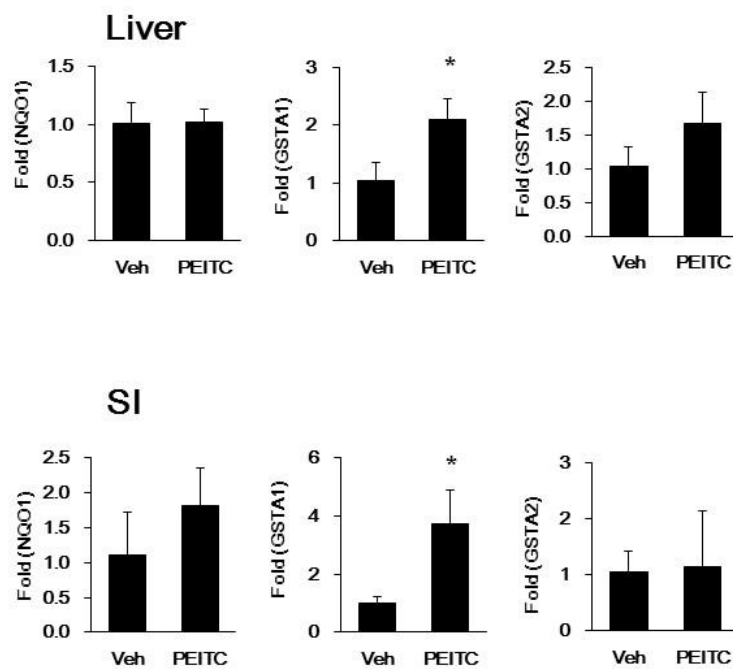
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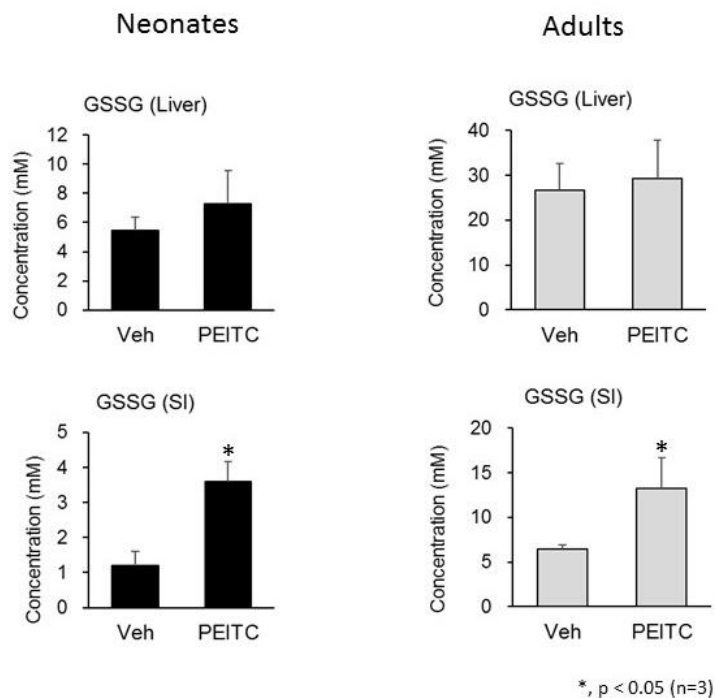
³Department of Pharmaceutics, School of Pharmacy, Kitasato University, 6-9-1 Shirokane, Minato-ku, Tokyo 108-8641, Japan.

Supplemental Figure 1



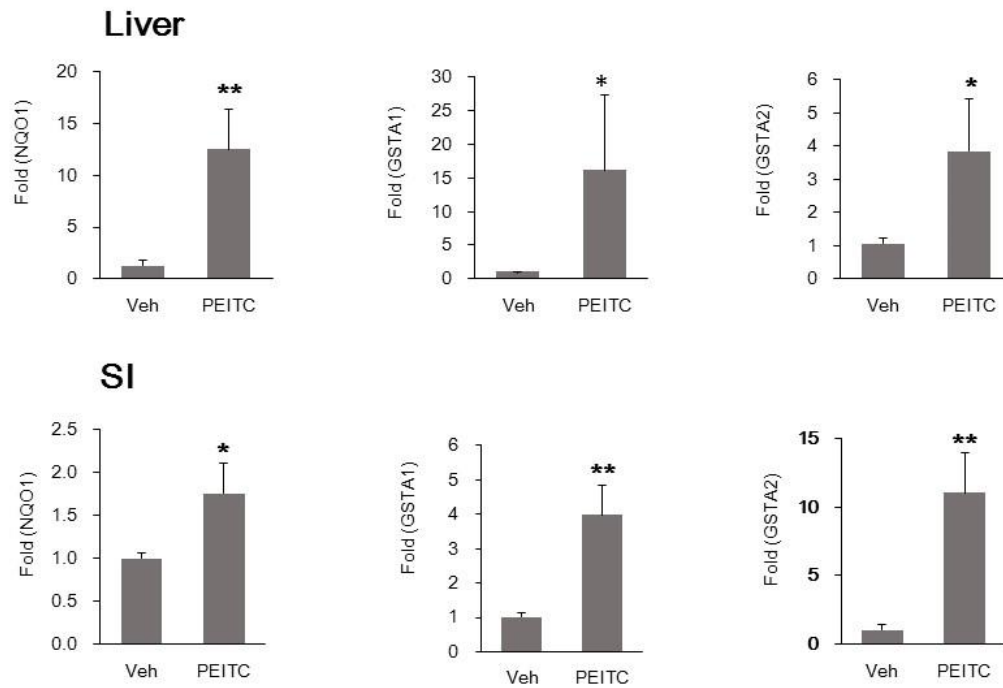
Supplemental Figure 1. Analysis of *Nrf2* target genes. Using RNA isolated in Figure 1 (neonatal *hUGT1* mice), gene expression patterns for *Nqo1*, *Gsta1* and *Gsta2* were quantitated by RT-qPCR expressed as Fold induction. Values are the means of \pm SD (n=3). Statistically significant differences between vehicle (Veh) and PEITC are indicated by asterisks (Student *t* test: *, $P < 0.05$).

Supplemental Figure 2



Supplemental Figure 2. Oxidative stress following PEITC treatment. **A.** Neonatal *hUGT1* mice were given an oral dose of PEITC (200 mg/kg) and GSSG levels measured in liver and small intestine (SI) after 24 hours. **B.** The same experiment was conducted on adult (6 week old) *hUGT1* mice. Values are the means of \pm SD (n=3). Statistically significant differences between vehicle (Veh) and PEITC are indicated by asterisks (Student *t* test: *, $P < 0.05$).

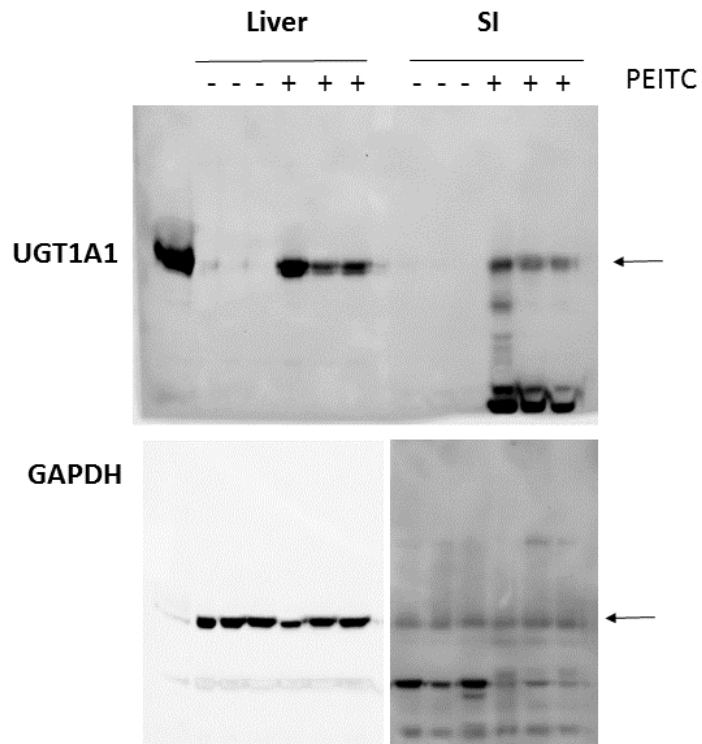
Supplemental Figure 3



Supplemental Figure 3. Impact of PEITC on *Nrf2* target genes in adult mice. RNA prepared from PEITC

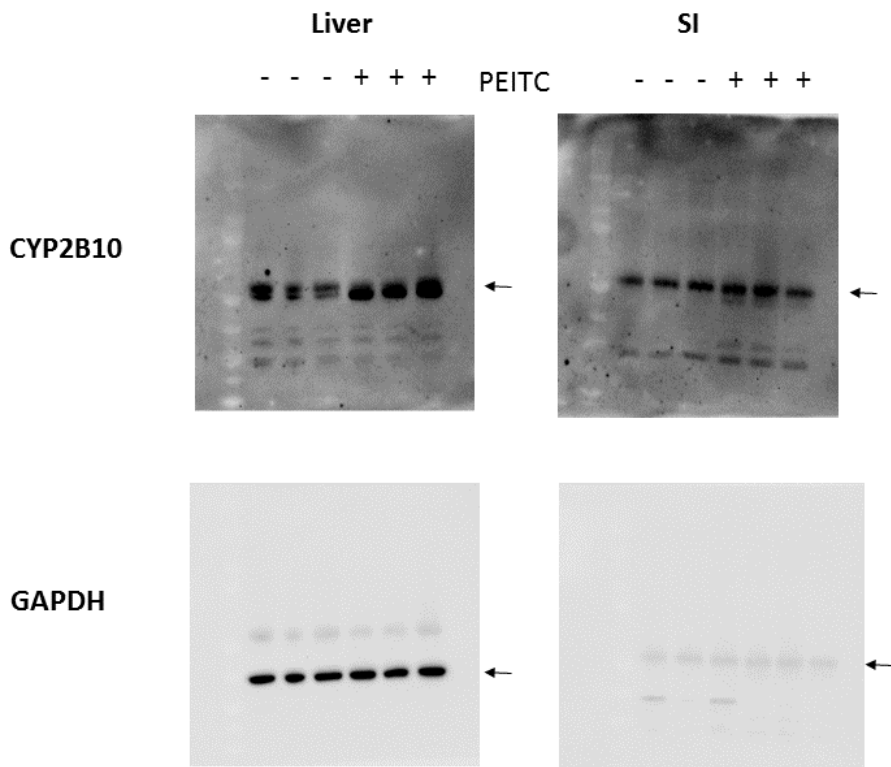
treated *hUGT1/Car^{+/-}* and *hUGT1/Car^{-/-}* mice from liver and small intestine (Figure 4) was used to quantitate *Nqo1*, *Gsta1* and *Gsta2* gene expression by real time PCR. Values are the means of \pm SD (n>3). Statistically significant differences between vehicle (Veh) and PEITC are indicated by asterisks (Student *t* test: *, $P < 0.05$; **, $P < 0.01$).

Figure 1



Supplemental Figure 4. Full length Western blot used for Figure 1.

Figure 2



Supplemental Figure 5. Full length Western blots used for Figure 2.

