

| Data Availability Statement                                      |                  | (Raw data)      |                  |  |             |
|--|------------------|-----------------|------------------|--|-------------|
|  |                  |                 |                  |  |             |
| Fig. 2b Ratio of liver weight/body weight after 12 months of CAC |                  |                 |                  |  |             |
|  |                  |                 |                  |  |             |
|  | mouse No.        | Body weight (g) | Liver weight (g) |  | LW/BW       |
| WT(C )   | 1                | 48.1            | 1.678            |  | 0.034885655 |
|  | 2                | 41.5            | 1.38             |  | 0.03325301  |
|  | 3                | 48.4            | 2.188            |  | 0.045206612 |
|  | 4                | 30.9            | 1.075            |  | 0.034789644 |
|  | 5                | 44.2            | 1.42             |  | 0.032126697 |
| mean   |                  | 42.62           | 1.5482           |  | 0.036325669 |
| SD   |                  | 7.151013914     | 0.416784357      |  | 0.005244119 |
| WT(E )   | 1                | 42.4            | 2.444            |  | 0.057641509 |
|  | 2                | 43              | 1.915            |  | 0.044534884 |
|  | 3                | 42.9            | 2.4              |  | 0.055944056 |
|  | 4                | 41              | 2.214            |  | 0.054       |
|  | 5                | 42.6            | 2.79             |  | 0.065492958 |
| mean   |                  | 42.38           | 2.3526           |  | 0.055512034 |
| SD   |                  | 0.80746517      | 0.321178766      |  | 0.007535311 |
| Adh3-/- (C)  | 1                | 40.3            | 2.49             |  | 0.0617866   |
|  | 2                | 39.9            | 1.55             |  | 0.038847118 |
|  | 3                | 43              | 2.79             |  | 0.064883721 |
|  | 4                | 32.3            | 1.53             |  | 0.047368421 |
|  | 5                | 42.6            | 2.5              |  | 0.058685446 |
| mean   |                  | 39.62           | 2.172            |  | 0.054820798 |
| SD   |                  | 4.313583197     | 0.589423447      |  | 0.010887307 |
| Adh3-/- (E)  | 1                | 37.9            | 2.88             |  | 0.075989446 |
|  | 2                | 36              | 2.24             |  | 0.062222222 |
|  | 3                | 32.8            | 1.659            |  | 0.050579268 |
|  | 4                | 31              | 1.336            |  | 0.043096774 |
|  | 5                | 31.5            | 1.808            |  | 0.057396825 |
| mean   |                  | 33.84           | 1.9846           |  | 0.058646572 |
| SD   |                  | 2.990484911     | 0.596836494      |  | 0.012438671 |
|  |                  |                 |                  |  |             |
| Student t test (one-sided test)                                  |                  |                 | <i>P</i>         |  |             |
|  | WT(E ) vs WT(C ) |                 | 0.000729782      |  |             |

| Fig. 3b The rate of ORO staining positive area in liver |           |                                    |                    |                                    |                                    |        |
|---|-----------|------------------------------------|--------------------|------------------------------------|------------------------------------|--------|
| Group   | Mouse No. | Photograph in the same preparation | % of positive area | Mean % of positive area in a mouse | Mean % of positive area in a group | SD     |
| WT(C)   | 1         | a                                  | 23.8               | 21.1                               | 16.1                               | 4.371  |
|   |           | b                                  | 18.1               |                                    |                                    |        |
|   |           | c                                  | 23.3               |                                    |                                    |        |
|   |           | d                                  | 19.0               |                                    |                                    |        |
|   | 2         | a                                  | 11.3               | 13.0                               |                                    |        |
|   |           | b                                  | 16.4               |                                    |                                    |        |
|   |           | c                                  | 15.0               |                                    |                                    |        |
|   |           | d                                  | 9.3                |                                    |                                    |        |
|   | 3         | a                                  | 13.0               | 14.2                               |                                    |        |
|   |           | b                                  | 15.9               |                                    |                                    |        |
|   |           | c                                  | 20.6               |                                    |                                    |        |
|   |           | d                                  | 7.4                |                                    |                                    |        |
| WT(E)   | 1         | a                                  | 52.9               | 56.5                               | 47.6                               | 11.178 |
|   |           | b                                  | 61.4               |                                    |                                    |        |
|   |           | c                                  | 56.5               |                                    |                                    |        |
|   |           | d                                  | 55.1               |                                    |                                    |        |
|   | 2         | a                                  | 35.8               | 35.1                               |                                    |        |
|   |           | b                                  | 34.3               |                                    |                                    |        |
|   |           | c                                  | 34.8               |                                    |                                    |        |
|   |           | d                                  | 35.4               |                                    |                                    |        |
|   | 3         | a                                  | 58.9               | 51.4                               |                                    |        |
|   |           | b                                  | 40.4               |                                    |                                    |        |
|   |           | c                                  | 55.7               |                                    |                                    |        |
|   |           | d                                  | 50.5               |                                    |                                    |        |
| Adh3 <sup>-/-</sup> (C)                                 | 1         | a                                  | 3.1                | 1.3                                | 8.0                                | 8.295  |
|   |           | b                                  | 1.8                |                                    |                                    |        |
|   |           | c                                  | 0.3                |                                    |                                    |        |
|   |           | d                                  | 0.1                |                                    |                                    |        |
|   | 2         | a                                  | 9.0                | 5.5                                |                                    |        |
|   |           | b                                  | 8.6                |                                    |                                    |        |
|   |           | c                                  | 2.7                |                                    |                                    |        |
|   |           | d                                  | 1.8                |                                    |                                    |        |
|   | 3         | a                                  | 19.4               | 17.3                               |                                    |        |
|   |           | b                                  | 10.6               |                                    |                                    |        |
|   |           | c                                  | 21.6               |                                    |                                    |        |
|   |           | d                                  | 17.6               |                                    |                                    |        |
| Adh3 <sup>-/-</sup> (E)                                 | 1         | a                                  | 8.4                | 8.8                                | 12.6                               | 3.329  |
|   |           | b                                  | 11.7               |                                    |                                    |        |
|   |           | c                                  | 9.8                |                                    |                                    |        |
|   |           | d                                  | 5.5                |                                    |                                    |        |
|   | 2         | a                                  | 14.7               | 15.0                               |                                    |        |
|   |           | b                                  | 8.6                |                                    |                                    |        |
|   |           | c                                  | 22.4               |                                    |                                    |        |
|   |           | d                                  | 14.4               |                                    |                                    |        |
|   | 3         | a                                  | 9.8                | 14.0                               |                                    |        |
|   |           | b                                  | 10.6               |                                    |                                    |        |
|   |           | c                                  | 18.3               |                                    |                                    |        |
|   |           | d                                  | 17.4               |                                    |                                    |        |
| Student t test (one side test)                          |           | P                                  | n=3 mice           |                                    |                                    |        |
| WT(E) vs WT(C)  |           |                                    | 0.00517684         |                                    |                                    |        |
| WT(E) vs Adh3 <sup>-/-</sup> (E)                        |           |                                    | 0.003245182        |                                    |                                    |        |

| Fig. 3c Triglyceride (TG) content in the liver after 12 months of CAC |  |                 |                    |
|---|--|-----------------|--------------------|
|   | mouse No.  | TG (mg)/g liver |                    |
| WT(C )  | 1  | 5.076           |                    |
|   | 2  | 8.786           |                    |
|   | 3  | 6.032           |                    |
|   | 4  | 7.878           |                    |
|   | 5  | 4.789           |                    |
| mean  |  | 6.5122          |                    |
| SD  |  | 1.753443526     |                    |
| WT(E )  | 1  | 11.07           |                    |
|   | 2  | 9.543           |                    |
|   | 3  | 13.799          |                    |
|   | 4  | 13.321          |                    |
|   | 5  | 15.865          |                    |
| mean  |  | 12.7196         |                    |
| SD  |  | 2.461315461     |                    |
| <i>Adh3</i> <sup>-/-</sup> (C)  | 1  | 4.934           |                    |
|   | 2  | 7.143           |                    |
|   | 3  | 7.89            |                    |
|   | 4  | 5.012           |                    |
|   | 5  | 4.356           |                    |
| mean  |  | 5.867           |                    |
| SD  |  | 1.549624148     |                    |
| <i>Adh3</i> <sup>-/-</sup> (E)  | 1  | 8.467           |                    |
|   | 2  | 4.844           |                    |
|   | 3  | 8.457           |                    |
|   | 4  | 7.067           |                    |
|   | 5  | 9.445           |                    |
| mean  |  | 7.656           |                    |
| SD  |  | 1.785644702     |                    |
| Student t   | test (one-sided test)  |                 | <i>P</i>           |
|   | <b>WT(E ) vs WT(C )</b>  |                 | <b>0.00265739</b>  |
|   | <b>WT(E ) vs <i>Adh3</i><sup>-/-</sup> (E )</b>                  |                 | <b>0.008762749</b> |
|   | <i>Adh3</i> <sup>-/-</sup> (E) vs <i>Adh3</i> <sup>-/-</sup> (C) |                 | 0.193665374        |

| Fig. 4 Serum AST and ALT of mice after 12 month CAC |           |                    |             |
|---|-----------|--------------------|-------------|
|   |           |                    |             |
|   |           |                    |             |
|   | mouse No. | AST(IU/L)          | ALT(IU/L)   |
| WT(C)   | 1         | 54                 | 30          |
|   | 2         | 39                 | 18          |
|   | 3         | 59                 | 50          |
|   | 4         | 82                 | 16          |
|   | 5         | 106                | 31          |
|   | mean      | 68                 | 29          |
|   | SD        | 26                 | 14          |
| WT(E)   | 1         | 200                | 75          |
|   | 2         | 192                | 391         |
|   | 3         | 236                | 171         |
|   | 4         | 140                | 276         |
|   | 5         | 82                 | 115         |
|   | mean      | 170                | 206         |
|   | SD        | 60                 | 128         |
| Adh3-/- (C)   | 1         | 45                 | 36          |
|   | 2         | 60                 | 55          |
|   | 3         | 114                | 162         |
|   | 4         | 188                | 148         |
|   | 5         | 129                | 164         |
|   | mean      | 107                | 113         |
|   | SD        | 57                 | 62          |
| Adh3-/- (E)   | 1         | 61                 | 44          |
|   | 2         | 54                 | 53          |
|   | 3         | 47                 | 50          |
|   | 4         | 77                 | 42          |
|   | 5         | 85                 | 108         |
|   | mean      | 65                 | 59          |
|   | SD        | 15.8492902         | 27.52816739 |
| Student t test(one-sided test)                      |           | AST                | ALT         |
|   |           | <i>P</i>           | <i>P</i>    |
| WT(E) vs WT(C)                                      |           | 0.0274379753109604 | 0.007767607 |
| WT(E) vs Adh3-/- (E)                                |           | 0.00265            | 0.018694465 |
| WT(E) vs Adh3-/- (C)                                |           | 0.239180882212304  | 0.092243922 |
| Adh3-/- (E) vs Adh3-/- (C)                          |           | 0.074805162        | 0.058230186 |

Fig.6a ADH3 (GSNOR) mRNA in the liver

|                        |       |                  | GSNOR mRNA/<br>$\beta$ actin mRNA |          |             |             |
|------------------------|-------|------------------|-----------------------------------|----------|-------------|-------------|
|                        | Month | mouse No         |                                   | mean     |             | SD          |
| WT(C)                  | 1     | 1                | 1                                 | 0.937    | 1.0004      | 0.109413436 |
| WT(C)                  | 1     |                  | 2                                 | 0.875    |             |             |
| WT(C)                  | 1     |                  | 3                                 | 1.104    |             |             |
| WT(C)                  | 1     |                  | 4                                 | 0.96     |             |             |
| WT(C)                  | 1     |                  | 5                                 | 1.126    |             |             |
| WT(C)                  | 4     |                  | 1                                 | 0.742    | 0.6848      | 0.113996491 |
| WT(C)                  | 4     |                  | 2                                 | 0.66     |             |             |
| WT(C)                  | 4     |                  | 3                                 | 0.706    |             |             |
| WT(C)                  | 4     |                  | 4                                 | 0.81     |             |             |
| WT(C)                  | 4     |                  | 5                                 | 0.506    |             |             |
| WT(C)                  | 12    |                  | 1                                 | 0.683    | 0.7652      | 0.136074244 |
| WT(C)                  | 12    |                  | 2                                 | 0.926    |             |             |
| WT(C)                  | 12    |                  | 3                                 | 0.855    |             |             |
| WT(C)                  | 12    |                  | 4                                 | 0.583    |             |             |
| WT(C)                  | 12    |                  | 5                                 | 0.779    |             |             |
| WT(E)                  | 1     |                  | 1                                 |          | 1.145       | 0.234034898 |
| WT(E)                  | 1     |                  | 2                                 | 1.396    |             |             |
| WT(E)                  | 1     |                  | 3                                 | 1.105    |             |             |
| WT(E)                  | 1     |                  | 4                                 |          |             |             |
| WT(E)                  | 1     |                  | 5                                 | 0.933    |             |             |
| WT(E)                  | 4     |                  | 1                                 | 0.933    | 0.949       | 0.142107354 |
| WT(E)                  | 4     |                  | 2                                 | 1.171    |             |             |
| WT(E)                  | 4     |                  | 3                                 | 0.948    |             |             |
| WT(E)                  | 4     |                  | 4                                 | 0.775    |             |             |
| WT(E)                  | 4     |                  | 5                                 | 0.918    |             |             |
| WT(E)                  | 12    |                  | 1                                 | 1.39     | 1.01575     | 0.261768823 |
| WT(E)                  | 12    |                  | 2                                 | 0.836    |             |             |
| WT(E)                  | 12    |                  | 3                                 | 1.003    |             |             |
| WT(E)                  | 12    |                  | 4                                 |          |             |             |
| WT(E)                  | 12    |                  | 5                                 | 0.834    |             |             |
|                        |       |                  |                                   | <i>P</i> |             |             |
| 2 way ANOVA            |       | WT(E) vs WT(C)   |                                   |          | 0.002       |             |
| FTEST                  |       | WT(E) vs WT(C)   |                                   |          | 4.38504E-10 |             |
| Student t test (1M)    |       | WT(E) vs WT(C)   |                                   |          | 0.134198523 |             |
| Student t test (4M)    |       | WT(E) vs WT(C)   |                                   |          | 0.005914223 |             |
| Student t test (12M)   |       | WT(E) - vs WT(C) |                                   |          | 0.051937016 |             |
| Student t test (1-12M) |       | WT(E) vs WT(C)   |                                   |          | 0.005442316 |             |

**Fig.6b GSNOR activity of the liver**

|       |                        |                       | GSNOR activity (unit)/ |                    |             |  |
|-------|------------------------|-----------------------|------------------------|--------------------|-------------|--|
|       | Month                  | mouse No.             | mg liver protein       | mean               | SD          |  |
| WT(C) | 1                      | 1                     | 9.213                  | 7.0954             | 2.83989072  |  |
| WT(C) | 1                      | 2                     | 4.199                  |                    |             |  |
| WT(C) | 1                      | 3                     | 4.62                   |                    |             |  |
| WT(C) | 1                      | 4                     | 10.718                 |                    |             |  |
| WT(C) | 1                      | 5                     | 6.727                  |                    |             |  |
| WT(C) | 4                      | 1                     | 3.76                   | 4.1528             | 1.273741222 |  |
| WT(C) | 4                      | 2                     | 4.135                  |                    |             |  |
| WT(C) | 4                      | 3                     | 6.1                    |                    |             |  |
| WT(C) | 4                      | 4                     | 4.21                   |                    |             |  |
| WT(C) | 4                      | 5                     | 2.559                  |                    |             |  |
| WT(C) | 12                     | 1                     | 0.942                  | 1.8266             | 0.908625776 |  |
| WT(C) | 12                     | 2                     | 1.016                  |                    |             |  |
| WT(C) | 12                     | 3                     | 3.167                  |                    |             |  |
| WT(C) | 12                     | 4                     | 1.964                  |                    |             |  |
| WT(C) | 12                     | 5                     | 2.044                  |                    |             |  |
| WT(E) | 1                      | 1                     | 7.826                  | 8.578              | 1.331305462 |  |
| WT(E) | 1                      | 2                     | 10.792                 |                    |             |  |
| WT(E) | 1                      | 3                     | 8.649                  |                    |             |  |
| WT(E) | 1                      | 4                     | 7.342                  |                    |             |  |
| WT(E) | 1                      | 5                     | 8.2789                 |                    |             |  |
| WT(E) | 4                      | 1                     | 5.198                  | 6.6846             | 3.921566562 |  |
| WT(E) | 4                      | 2                     | 13.262                 |                    |             |  |
| WT(E) | 4                      | 3                     | 5.001                  |                    |             |  |
| WT(E) | 4                      | 4                     | 3.057                  |                    |             |  |
| WT(E) | 4                      | 5                     | 6.905                  |                    |             |  |
| WT(E) | 12                     | 1                     | 4.552                  | 2.5442             | 1.411212316 |  |
| WT(E) | 12                     | 2                     | 1.805                  |                    |             |  |
| WT(E) | 12                     | 3                     | 1.61                   |                    |             |  |
| WT(E) | 12                     | 4                     | 1.268                  |                    |             |  |
| WT(E) | 12                     | 5                     | 3.486                  |                    |             |  |
|       |                        |                       | <i>P</i>               |                    |             |  |
|       | 2 way ANOVA            | WT(E) vs WT(C)        |                        | 0.0639             |             |  |
|       | <b>FTEST (1-12M)</b>   | <b>WT(E) vs WT(C)</b> |                        | <b>0.019335645</b> |             |  |
|       | Student t test (1M)    | WT(E) vs WT(C)        |                        | 0.160758111        |             |  |
|       | Student t test (4M)    | WT(E) vs WT(C)        |                        | 0.103498887        |             |  |
|       | Student t test (12M)   | WT(E) vs WT(C)        |                        | 0.183528909        |             |  |
|       | Student t test (1-12M) | WT(E) vs WT(C)        |                        | 0.092762396        |             |  |

| Fig. 2e Triglyceride (TG) content in the liver after 12 months of CAC |  |                 |                    |
|---|--|-----------------|--------------------|
|   | mouse No.  | TG (mg)/g liver |                    |
| WT(C )  | 1  | 5.076           |                    |
|   | 2  | 8.786           |                    |
|   | 3  | 6.032           |                    |
|   | 4  | 7.878           |                    |
|   | 5  | 4.789           |                    |
| mean  |  | 6.5122          |                    |
| SD  |  | 1.753443526     |                    |
| WT(E )  | 1  | 11.07           |                    |
|   | 2  | 9.543           |                    |
|   | 3  | 13.799          |                    |
|   | 4  | 13.321          |                    |
|   | 5  | 15.865          |                    |
| mean  |  | 12.7196         |                    |
| SD  |  | 2.461315461     |                    |
| <i>Adh3</i> <sup>-/-</sup> (C)  | 1  | 4.934           |                    |
|   | 2  | 7.143           |                    |
|   | 3  | 7.89            |                    |
|   | 4  | 5.012           |                    |
|   | 5  | 4.356           |                    |
| mean  |  | 5.867           |                    |
| SD  |  | 1.549624148     |                    |
| <i>Adh3</i> <sup>-/-</sup> (E)  | 1  | 8.467           |                    |
|   | 2  | 4.844           |                    |
|   | 3  | 8.457           |                    |
|   | 4  | 7.067           |                    |
|   | 5  | 9.445           |                    |
| mean  |  | 7.656           |                    |
| SD  |  | 1.785644702     |                    |
| Student t   | test (one-sided test)  |                 | <i>P</i>           |
|   | <b>WT(E ) vs WT(C )</b>  |                 | <b>0.00265739</b>  |
|   | <b>WT(E ) vs <i>Adh3</i><sup>-/-</sup> (E )</b>                  |                 | <b>0.008762749</b> |
|   | <i>Adh3</i> <sup>-/-</sup> (E) vs <i>Adh3</i> <sup>-/-</sup> (C) |                 | 0.193665374        |

| Fig. 3 Serum AST and ALT of mice after 12 month CAC              |           |                    |             |
|--|-----------|--------------------|-------------|
|  |           |                    |             |
|  |           |                    |             |
|  | mouse No. | AST(IU/L)          | ALT(IU/L)   |
| WT(C)  | 1         | 54                 | 30          |
|  | 2         | 39                 | 18          |
|  | 3         | 59                 | 50          |
|  | 4         | 82                 | 16          |
|  | 5         | 106                | 31          |
|  | mean      | 68                 | 29          |
|  | SD        | 26                 | 14          |
| WT(E)  | 1         | 200                | 75          |
|  | 2         | 192                | 391         |
|  | 3         | 236                | 171         |
|  | 4         | 140                | 276         |
|  | 5         | 82                 | 115         |
|  | mean      | 170                | 206         |
|  | SD        | 60                 | 128         |
| <i>Adh3</i> <sup>-/-</sup> (C)                                   | 1         | 45                 | 36          |
|  | 2         | 60                 | 55          |
|  | 3         | 114                | 162         |
|  | 4         | 188                | 148         |
|  | 5         | 129                | 164         |
|  | mean      | 107                | 113         |
|  | SD        | 57                 | 62          |
| <i>Adh3</i> <sup>-/-</sup> (E)                                   | 1         | 61                 | 44          |
|  | 2         | 54                 | 53          |
|  | 3         | 47                 | 50          |
|  | 4         | 77                 | 42          |
|  | 5         | 85                 | 108         |
|  | mean      | 65                 | 59          |
|  | SD        | 15.8492902         | 27.52816739 |
| Student t test(one-sided test)                                   |           | AST                | ALT         |
|  |           | <i>P</i>           | <i>P</i>    |
| WT(E) vs WT(C)   |           | 0.0274379753109604 | 0.007767607 |
| WT(E) vs <i>Adh3</i> <sup>-/-</sup> (E)                          |           | 0.00265            | 0.018694465 |
| WT(E) vs <i>Adh3</i> <sup>-/-</sup> (C)                          |           | 0.239180882212304  | 0.092243922 |
| <i>Adh3</i> <sup>-/-</sup> (E) vs <i>Adh3</i> <sup>-/-</sup> (C) |           | 0.074805162        | 0.058230186 |



Fig. 4b ADH3 (GSNOR) mRNA in the liver

|                        |       |                | GSNOR mRNA/<br>$\beta$ actin mRNA |          |             |             |
|------------------------|-------|----------------|-----------------------------------|----------|-------------|-------------|
|                        | Month | mouse No       |                                   | mean     | SD          |             |
| WT(C)                  | 1     | 1              | 1                                 | 0.937    | 1.0004      | 0.109413436 |
| WT(C)                  | 1     | 1              | 2                                 | 0.875    |             |             |
| WT(C)                  | 1     | 1              | 3                                 | 1.104    |             |             |
| WT(C)                  | 1     | 1              | 4                                 | 0.96     |             |             |
| WT(C)                  | 1     | 1              | 5                                 | 1.126    |             |             |
| WT(C)                  | 4     | 4              | 1                                 | 0.742    | 0.6848      | 0.113996491 |
| WT(C)                  | 4     | 4              | 2                                 | 0.66     |             |             |
| WT(C)                  | 4     | 4              | 3                                 | 0.706    |             |             |
| WT(C)                  | 4     | 4              | 4                                 | 0.81     |             |             |
| WT(C)                  | 4     | 4              | 5                                 | 0.506    |             |             |
| WT(C)                  | 12    | 12             | 1                                 | 0.683    | 0.7652      | 0.136074244 |
| WT(C)                  | 12    | 12             | 2                                 | 0.926    |             |             |
| WT(C)                  | 12    | 12             | 3                                 | 0.855    |             |             |
| WT(C)                  | 12    | 12             | 4                                 | 0.583    |             |             |
| WT(C)                  | 12    | 12             | 5                                 | 0.779    |             |             |
| WT(E)                  | 1     | 1              | 1                                 |          | 1.145       | 0.234034898 |
| WT(E)                  | 1     | 1              | 2                                 | 1.396    |             |             |
| WT(E)                  | 1     | 1              | 3                                 | 1.105    |             |             |
| WT(E)                  | 1     | 1              | 4                                 |          |             |             |
| WT(E)                  | 1     | 1              | 5                                 | 0.933    |             |             |
| WT(E)                  | 4     | 4              | 1                                 | 0.933    | 0.949       | 0.142107354 |
| WT(E)                  | 4     | 4              | 2                                 | 1.171    |             |             |
| WT(E)                  | 4     | 4              | 3                                 | 0.948    |             |             |
| WT(E)                  | 4     | 4              | 4                                 | 0.775    |             |             |
| WT(E)                  | 4     | 4              | 5                                 | 0.918    |             |             |
| WT(E)                  | 12    | 12             | 1                                 | 1.39     | 1.01575     | 0.261768823 |
| WT(E)                  | 12    | 12             | 2                                 | 0.836    |             |             |
| WT(E)                  | 12    | 12             | 3                                 | 1.003    |             |             |
| WT(E)                  | 12    | 12             | 4                                 |          |             |             |
| WT(E)                  | 12    | 12             | 5                                 | 0.834    |             |             |
|                        |       |                |                                   | <i>P</i> |             |             |
| 2 way ANOVA            |       | WT(E) vs WT(C) |                                   |          | 0.002       |             |
| FTEST                  |       | WT(E) vs WT(C) |                                   |          | 4.38504E-10 |             |
| Student t test (1M)    |       | WT(E) vs WT(C) |                                   |          | 0.134198523 |             |
| Student t test (4M)    |       | WT(E) vs WT(C) |                                   |          | 0.005914223 |             |
| Student t test (12M)   |       | WT(E) vs WT(C) |                                   |          | 0.051937016 |             |
| Student t test (1-12M) |       | WT(E) vs WT(C) |                                   |          | 0.005442316 |             |

**Fig. 4 Supplement GSNOR activity of the liver**

|                        |       |                       | GSNOR activity (unit)/ |                    |    |             |
|------------------------|-------|-----------------------|------------------------|--------------------|----|-------------|
|                        | Month | mouse No.             | mg liver protein       | mean               | SD |             |
| WT(C)                  | 1     | 1                     | 9.213                  | 7.0954             |    | 2.83989072  |
| WT(C)                  | 1     | 2                     | 4.199                  |                    |    |             |
| WT(C)                  | 1     | 3                     | 4.62                   |                    |    |             |
| WT(C)                  | 1     | 4                     | 10.718                 |                    |    |             |
| WT(C)                  | 1     | 5                     | 6.727                  |                    |    |             |
| WT(C)                  | 4     | 1                     | 3.76                   | 4.1528             |    | 1.273741222 |
| WT(C)                  | 4     | 2                     | 4.135                  |                    |    |             |
| WT(C)                  | 4     | 3                     | 6.1                    |                    |    |             |
| WT(C)                  | 4     | 4                     | 4.21                   |                    |    |             |
| WT(C)                  | 4     | 5                     | 2.559                  |                    |    |             |
| WT(C)                  | 12    | 1                     | 0.942                  | 1.8266             |    | 0.908625776 |
| WT(C)                  | 12    | 2                     | 1.016                  |                    |    |             |
| WT(C)                  | 12    | 3                     | 3.167                  |                    |    |             |
| WT(C)                  | 12    | 4                     | 1.964                  |                    |    |             |
| WT(C)                  | 12    | 5                     | 2.044                  |                    |    |             |
| WT(E)                  | 1     | 1                     | 7.826                  | 8.578              |    | 1.331305462 |
| WT(E)                  | 1     | 2                     | 10.792                 |                    |    |             |
| WT(E)                  | 1     | 3                     | 8.649                  |                    |    |             |
| WT(E)                  | 1     | 4                     | 7.342                  |                    |    |             |
| WT(E)                  | 1     | 5                     | 8.2789                 |                    |    |             |
| WT(E)                  | 4     | 1                     | 5.198                  | 6.6846             |    | 3.921566562 |
| WT(E)                  | 4     | 2                     | 13.262                 |                    |    |             |
| WT(E)                  | 4     | 3                     | 5.001                  |                    |    |             |
| WT(E)                  | 4     | 4                     | 3.057                  |                    |    |             |
| WT(E)                  | 4     | 5                     | 6.905                  |                    |    |             |
| WT(E)                  | 12    | 1                     | 4.552                  | 2.5442             |    | 1.411212316 |
| WT(E)                  | 12    | 2                     | 1.805                  |                    |    |             |
| WT(E)                  | 12    | 3                     | 1.61                   |                    |    |             |
| WT(E)                  | 12    | 4                     | 1.268                  |                    |    |             |
| WT(E)                  | 12    | 5                     | 3.486                  |                    |    |             |
|                        |       |                       | <i>P</i>               |                    |    |             |
| 2 way ANOVA            |       | WT(E) vs WT(C)        |                        | 0.0639             |    |             |
| <b>FTEST (1-12M)</b>   |       | <b>WT(E) vs WT(C)</b> |                        | <b>0.019335645</b> |    |             |
| Student t test (1M)    |       | WT(E ) vs WT(C )      |                        | 0.160758111        |    |             |
| Student t test (4M)    |       | WT(E ) vs WT(C )      |                        | 0.103498887        |    |             |
| Student t test (12M)   |       | WT(E ) vs WT(C )      |                        | 0.183528909        |    |             |
| Student t test (1-12M) |       | WT(E ) vs WT(C )      |                        | 0.092762396        |    |             |