

Supporting Information

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Hydroxytyrosol-1-glucoopyranoside alleviates senescence via Nrf2 and AMPK signaling pathway

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Table S1: Strains used in this study

| Strain | Description | Source |
|---------|---|--------------------------|
| BW25113 | $\Delta rhaBADLD78$, $\Delta araBADAH33$, $\Delta lacZWJ16$ <i>hsdR514 rrmBT14</i> | Coli Genome Stock Center |
| HTG01 | BW25113, pZE-UGT85A1 and pCS-pgm-galU | This study |
| HTG02 | BW25113, pZE-UGT85A1-pgm-galU | This study |
| HTG03 | BW25113, pCS-UGT85A1-pgm-galU | This study |

Table S2: Plasmids used in this study

| Plasmid | Description | Source |
|----------------------|--|------------|
| pZE12-luc | PLlacO1, <i>AmpR</i> | Ref. 20 |
| pCS27 | PLlacO1, <i>KanR</i> | Ref. 20 |
| pZE-UGT85A1 | pZE12-luc, <i>UGT85A1</i> from <i>A. thaliana</i> | This study |
| pCS-pgm-galU | pCS27, <i>pgm</i> and <i>galU</i> from <i>E. coli</i> | This study |
| pZE-UGT85A1-pgm-galU | pZE12-luc, <i>UGT85A1</i> from <i>A. thaliana</i> , <i>pgm</i> and <i>galU</i> from <i>E. coli</i> , two operons | This study |
| pCS-UGT85A1-pgm-galU | pCS27, <i>UGT85A1</i> from <i>A. thaliana</i> , <i>pgm</i> and <i>galU</i> from <i>E. coli</i> , two operons | This study |

Table S3: Parameters of macroporous resins used for HTG purification

| Types | Polar | Specific Surface Area (m²/g) |
|--------------|--------------|--|
| HPD-300 | Non-polar | 800-870 |
| SP207 | Weak polar | 930 |
| SP825L | Weak polar | 1000 |
| AB-8 | Weak polar | 480-520 |
| HPD-600 | Polar | 550-600 |

Table S4: Primers designed for qRT-PCR

| Primers | Primer sequence |
|------------------|--------------------------|
| P53-F | CAGCACATGACGGAGGTTGT |
| P53-R | TCATCCAAATACTCCACACGC |
| P21-F | TGTCCGTCAGAACCCATGC |
| P21-R | AAAGTCGAAGTTCCATCGCTC |
| IL-6-F | ACTCACCTCTTCAGAACGAATTG |
| IL-6-R | CCATCTTTGGAAGGTTTCAGGTTG |
| IL-8-F | TTTTGCCAAGGAGTGCTAAAGA |
| IL-8-R | AACCCTCTGCACCCAGTTTTTC |
| IL-1 α -F | TGGTAGTAGCAACCAACGGGA |
| IL-1 α -R | ACTTTGATTGAGGGCGTCATTC |
| IL-1 β -F | AGCTACGAATCTCCGACCAC |
| IL-1 β -R | CGTTATCCCATGTGTCGAAGAA |
| CXCL1-F | ACCGAAGTCATAGCCCACTC |
| CXCL1-R | CTCCGTTACTTGGGGACACC |
| CXCL2-F | CAGCCAGATGCAATCAATGCC |
| CXCL2-R | TGGAATCCTGAACCCACTTCT |
| β -Actin-F | AGCGAGCATCCCCAAAGTT |
| β -Actin-R | GGGCACGAAGGCTCATCATT |