**Supplementary file 1A. The PCR primers used for qPCR.**

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| Primer name | Sequence (5'-3') | Reference |
| *β-actin*-qPCR-F | GCTGTTTTCCCCTCCATTGTT | (Zhang et al., 2017) |
| *β-actin*-qPCR-R | TCCCATGCCAACCATCACT |
| *gata1*-qPCR-F | TCTGAGCCTTCTCGTTGGG | (Ren et al., 2013) |
| *gata1*-qPCR-R | CTCTGGACGCTGGTGGAATA |
| *ikaros*-qPCR-F | TAACCTGCTCCGACACAT | (Wang, He, Ma, Xue, & Liu, 2015) |
| *ikaros*-qPCR-R | CTCCGCTGCTTGTAACTG |
| *hbae1*-qPCR-F | GCAAAGTCATCCTTCCAC | (Xue, Gao, & Liu, 2015) |
| *hbae1*-qPCR-R | GAAGTAGGTCTTGGTCTGG |
| *hbbe1*-qPCR-F | CTGAACATCTAAAGTCGAAAA | (Xue et al., 2015) |
| *hbbe1*-qPCR-R | ACACCTTGCCAGAGCCT |
| *pu.1*-qPCR-F | AGGAGTGTATGAGAGACCACATCAG | (Ren et al., 2013) |
| *pu.1*-qPCR-R | ATTTCGCAGAAGGTCAAGCA |
| *mfap4*-qPCR-F | ATGGACGGCAGTGTGAAT | (Wang et al., 2015) |
| *mfap4*-qPCR-R | CTTCTTGTGGCGTGTCAG |
| *lyz*-qPCR-F | GTGAAAATGGACGGGCTGAA | (Wang et al., 2015) |
| *lyz*-qPCR-R | CTTTGTTTGCGCTGCTCACA |
| *keap1a*-qPCR-F | GCACTGACCTACACCTTCGC | (Liu et al., 2019) |
| *keap1a*-qPCR-R | GCCTTGTAGACCTCGCTCTC |
| *hmox1a*-qPCR-F | GCTTCTGCTGTGCTCTCTATACG | (Holowiecki, O'Shields, & Jenny, 2017) |
| *hmox1a*-qPCR-R | CAATCTCTCTCAGTCTCTGTGC |
| *gclc*-qPCR-F | AACCGACACCCAAGATTCAGCACT | (Timme-Laragy, Van Tiem, Linney, & Di Giulio, 2009) |
| *gclc*-qPCR-R | CCATCATCCTCTGGAAACACCTCC |
| *ggt1b*-qPCR-F | ATCAATGCTCGTGAGACAGC | (Sant et al., 2017) |
| *ggt1b*-qPCR-R | TGGACAAACCACCTTTCTGG |
| *gsr*-qPCR-F | ATGTGCCAGGATCCAGTTTAG | (Sant et al., 2017) |
| *gsr*-qPCR-R | ACCCAAGAGTGGAAATACC |
| *gstp1*-qPCR-F | CGACTTGAAAGCCACCTGTGTC | (Timme-Laragy et al., 2012) |
| *gstp1*-qPCR-R | CTGTCGTTTTTGCCATATGCAGC |
| *gstk1*-qPCR-F | TACTTTGGGGTTCCTGTGCG | (Liu et al., 2019) |
| *gstk1*-qPCR-R | TCTCCTTCTCTGCTACCGCT |
| *gsto2*-qPCR-F | ATGGCTTCATCTCCAAAATGC | (Nguyen et al., 2016) |
| *gsto2*-qPCR-R | AGGGCAGAATCTCATGCTGTAG |
| *prdx1*-qPCR-F | GCCCGCGAGTTCACTTTC | (Nakajima et al., 2011) |
| *prdx1*-qPCR-R | GCTTCCATCCGGCTGGAC |
| *g6pd*-qPCR-F | ATGATGTGCGGGATGAGAAGGTAAA | (Holowiecki et al., 2017) |
| *g6pd*-qPCR-R | TGCTGTGGCAAATGTAGCCTGAGT |
| *pgd*-qPCR-F | TGGAATACGGCACACCTGTC | (Nguyen et al., 2016) |
| *pgd*-qPCR-R | AGGCTCTTACTGGCCTGAAC |
| *fbp1a*-qPCR-F | ATCGTTGTAGAGCCAGATAGAC | (Nguyen et al., 2016) |
| *fbp1a*-qPCR-R | TGTAGATGGCAAAGATGGTCC |
| human*SMARCA5*-qPCR-F | AACTTACTATCCGTTGGCGATT | (Zikmund et al., 2020) |
| human*SMARCA5*-qPCR-R | GGTTGCTTTGGAGCTTTCTG |
| human*HMOX1*-qPCR-F | TTCAAGCAGCTCTACCGCTC | (Chen et al., 2019) |
| human*HMOX1*-qPCR-R | GAACGCAGTCTTGGCCTCTT |
| human*KEAP1*-qPCR-F | AACGGTGCTGTCATGTACCA | (Tian et al., 2020) |
| human*KEAP1*-qPCR-R | GGCAGTGGGACAGGTTGAA |
| human*NRF2*-qPCR-F | TCCAGTCAGAAACCAGTGGAT | (Tian et al., 2020) |
| human*NRF2*-qPCR-R | GAATGTCTGCGCCAAAAGCTG |
| human*GADPH*-qPCR-F | AGCCACATCGCTCAGACAC | (Zikmund et al., 2020) |
| human*GADPH*-qPCR-R | GCCCAATACGACCAAATCC |

**Supplementary file 1B. The MOs used in this work.**

|  |  |  |  |
| --- | --- | --- | --- |
| Gene name | Sequence (5'-3') | Dosage (ng/embryo) | Reference |
| *pu.1* MO | CCTCCATTCTGTACGGATGCAGCAT | 4 | (Clay et al., 2007) |
| *hmox1a* MO | AGTCCATCTTTGTGCTGTAGATGTC | 1 | (Tzaneva & Perry, 2016) |

**Supplementary file 1C. The siRNAs used in this work.**

|  |  |  |
| --- | --- | --- |
| siRNA | Sequence (5'-3') | Reference |
| siControl | UUCUCCGAACGUGUCACGUTT | This work |
| si*SMARCA5*-1 | CCGGGCAAAUAGAUUCGAGUAUUUA | This work |
| si*SMARCA5*-2 | AAGAGGAGGAUGAAGAGCUAU | (Collins et al., 2002) |
| si*SMARCA5*-3 | GUUCUUUCCUCCACGUUUA | (Bryant, Colgrove, & Knipe, 2011) |

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