**Table 1** Primer sequences

|  |  |  |
| --- | --- | --- |
| Gene name | Forward（5-3） | Reverse（3-5） |
| α-SMA | GCGTGGCTATTCCTTCGTGACTAC | CGTCAGGCAGTTCGTAGCTCTTC |
| LC3 | GAA CAG GAGAAG GATGAA GACGG | AAT CCA CTG GGG ACT GAA ATA GC |
| Beclin-1 | CCA GGA ACT CAC AGC TCC ATT AC | GGA TGA ATC TTC GAG AGA CAC CA |
| PTEN | GCT GAG AGA CAT TAT GACACC GC | TTA CAC CAG TCC GTC CCT TTC |
| HES1 | TGG AGA GGC TGC CAA GGT TT | ACT GGA AGG TGA CAC TGC GTT |
| GAPDH | CGT GTT CCT ACC CCC AAT GTG | TAG CCC AAG ATG CCC TTC AGT |

**Table 2 PCR procedure**

|  |  |
| --- | --- |
| Cycle | Cycle Point |
| Hold at 95℃，30s |  |
| Cycling (40 repeats) | Step 1 95℃，5 s |
| Step 2 60℃，20 s |
| Melt (65-95℃) | 2.2℃/s |

**Table 3: Effect of the expression of PTEN, LC3, Beclin-1, α-SMA, and HES1 mRNA in mouse liver fibrosis induced by sodium arsenite**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group | LC3 | Beclin-1 | PTEN | α-SMA | HES1 |
| control | 1.04±0.05 | 1.03±0.03 | 1.03±0.04 | 1.02±0.02 | 1.03±0.08 |
| low-dose group | 2.66±0.37a | 1.84±0.17a | 1.79±0.17a | 3.05±0.52a | 1.49±0.22a |
| high-dose group | 3.25±0.29ab | 1.09±0.10b | 0.84±0.10b | 1.12±0.13b | 1.09±0.70 |
| *F* | 54.111 | 47.218 | 56.167 | 41.351 | 9.951 |
| *P* | ＜0.001 | ＜0.001 | ＜0.001 | ＜0.001 | .012 |

**Table 4: Effects of the protein expression of PTEN, LC3, Beclin-1, α-SMA, and Hes 1 in mouse liver fibrosis induced by sodium arsenite**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group | LC3 | Beclin-1 | PTEN | α-SMA | HES1 |
| control | 0.72±0.07 | 0.10±0.03 | 1.01±0.07 | 0.15±0.03 | 0.54±0.11 |
| low-dose group | 0.77±0.10 | 0.22±0.04a | 0.81±0.07a | 0.26±0.04a | 0.97±0.11a |
| high-dose  group | 0.43±0.14 ab | 0.42±0.07a | 0.56±0.08ab | 0.43±0.02a | 0.51±0.09b |
| *F* | 8.809 | 0.669 | 24.849 | 69.346 | 17.210 |
| *P* | 0.016 | 0.547 | 0.003 | ＜0.001 | 0.003 |

**Table 5: Effect of PTEN overexpression on sodium arsenite on Notch1/HES1/PTEN and autophagy-related protein expression in fibrosis-causing LX-2 cells**

| Group | Notch1 | HES1 | PTEN | Beclin-1 | LC3 |
| --- | --- | --- | --- | --- | --- |
| control | 0.27±0.05 | 0.44±0.09 | 0.99±0.12 | 0.88±0.04 | 0.60±0.07 |
| blank plasmid group | 0.19±0.03 | 0.36±0.05 | 0.88±0.07 | 0.76±0.04 | 0.52±0.05 |
| high-concentration sodium arsenite + blank plasmid group | 0.42±0.03a | 0.96±0.04a | 0.66±0.14a | 1.17±0.06a | 1.10±0.18a |
| PTEN overexpression group | 0.12±0.04b | 0.44±0.02b | 1.26±0.03b | 0.71±0.03b | 0.52±0.08b |
| high-concentration sodium arsenite + PTEN overexpression group | 0.16±0.03 | 0.48±0.10 | 0.87±0.11a | 0.82±0.06 | 0.54±0.12 |
| *F* | 34.569 | 38.920 | 13.469 | 42.223 | 15.295 |
| *P* | ＜0.001 | ＜0.001 | ＜0.001 | ＜0.001 | ＜0.001 |

**Table 6: Effect of PTEN overexpression on LX-2 cell fibrosis caused by sodium arsenite**

|  |  |  |
| --- | --- | --- |
| Group | α-SMA | CollagenⅠ |
| control | 0.64±0.06 | 0.09±0.01 |
| blank plasmid group | 0.59±0.02 | 0.11±0.01 |
| high-concentration sodium arsenite + blank plasmid group | 1.02±0.11a | 0.21±0.00a |
| PTEN overexpression group | 0.63±0.06b | 0.11±0.00b |
| high-concentration sodium arsenite + PTEN overexpression group | 0.60±0.07 | 0.15±0.01 |
| *F* | 20.115 | 47.257 |
| *P* | ＜0.001 | ＜0.001 |