**Supplementary Table**

**Supplementary Table S1.** Primers used for quantitative RT-PCR

|  |  |  |  |
| --- | --- | --- | --- |
| Gene symbol | Forward primer (5' to 3') | Reverse primer (5' to 3') | Amplicon length (nt) |
| *ACTB* | CCGCGAGAAGATGACCCAGAT | GGATAGCACAGCCTGGATAGCA | 79 |
| *PSMA1* | GACCTGACTACAAAGAATGTTTCCA | TGTGCCTTTCTCTGTGGTCTT | 125 |
| *PSMA2* | CCCTAAAGGAAAGCTTTGAAGGG | GCTATGGCAGCCAAGTAATCC | 121 |
| *PSMA3* | TGACCTGCCGTGATATCGTT | TCCATTAGTTAATTCACCAACCCAG | 116 |
| *PSMA4* | CCTTGAAGTCAGCACTTGCTTT | TGTTGCAATTTCCACTTTTTCAGC | 92 |
| *PSMA5* | CAGTGGAGAGTGTGACCCAA | TATGAAACAGCTGGGGTCCTTT | 144 |
| *PSMA6* | ACTGCAGCGGGAGTTAAACA | TGTAATTGCAGTTTCCACTGTCTG | 105 |
| *PSMA7* | CATAGGTCGGGGTGCCAAG | ACCTGACTGAACCACTTCCAG | 127 |
| *PSMA8* | ATGCAATAGGCCGAAGTGCT | ACCAGACTGGACAACTTCTAGC | 131 |
| *PSMB1* | TGATGAAGAAGGAAAGGGGGC | GTAGCATGGCACTTGCTGAG | 98 |
| *PSMB2* | ATGGACTACCTGGCAGCCTTG | CACGTGAGATAGTCGGTGTGTAGT | 109 |
| *PSMB3* | TGCCCCATGGTGACTGATGA | TCCGGATCCATGTTGGGCTC | 98 |
| *PSMB4* | CAACCGGTTTCAAATCGCCA | TGGGCAATATCCCAGTTGGTC | 87 |
| *PSMB5* | TCCAGGGAGTCTCAGTGATGG | CTCCATGGCGGAACTTGAAGG | 119 |
| *PSMB6* | AATTCACTGCCAATGCTCTCG | TACCCCTGACTCTGCAATGG | 92 |
| *PSMB7* | ACCAGGCTTGGCCGGTA | AGCACCTCAATCTCCAGAGGA | 83 |
| *PSMB8* | GCTGGGATAAGAAGGGTCCTGG | CCCACTACCCGTGGAGAACA | 86 |
| *PSMB9* | CGCTTCACCACAGACGCTAT | CCACACCGGCAGCTGTAATA | 94 |
| *PSMB10* | CGAACATGACGCTGGAGGCT | CACATGCGTCCACATTGCCC | 99 |
| *PSMB11* | GCTACGACATGAGCACCCAG | GCCCCCTGAATAGGCATCAC | 86 |

**Supplementary Table S2.** IC50 values of cisplatin and carfilzomib after simultaneous knockdown of PSMB5, PSMB8, and PSMB9. Data represent the mean ± SD of 4 independent experiments. IC50, half maximal inhibitory concentration; NT, non-target.

|  |  |  |
| --- | --- | --- |
|  | IC50 values of cisplatin(mol/L) | IC50 values of carfilzomib(nmol/L) |
|  | siNT | siPSMB5/8/9 | *P* | siNT | siPSMB5/8/9 | *P* |
| A549ddpR | 28.2±2.6 | 28.1±4.5 | 0.97 | 788.3±322.5 | 745.5±499.8 | 0.91 |
| H1299ddpR | 20.0±3.1 | 15.0±1.8 | <0.01 | 9.5±1.4 | 1.4±0.8 | <0.001 |