

Retinol dehydrogenase-10 promotes development and progression of human glioma via the TWEAK-NF- κ B axis

SUPPLYMENTARY MATERIALS

Supplementary Table 1: Expression of RDH10 in LGG and GBM samples in TCGA

| | | Level of expression of the gene | | Total | P value |
|------------------|-----|---------------------------------|-----------------|-------|---------|
| | | Low expression | High expression | | |
| RDH10 expression | LGG | 329 | 186 | 515 | .000 |
| | GBM | 5 | 147 | 152 | |
| Total | | 334 | 333 | 667 | |

Supplementary Table 2: List of IKK α (NFKBIA) downstream genes expression changed in microarray

| Genes | Entrez Gene Name | FC (shRDH10/shCtrl) | Corrected P-Value |
|---------|---|---------------------|-------------------|
| BIRC3 | baculoviral IAP repeat containing 3 | 3.37 | 3.96E-04 |
| BCL2L1 | BCL2 like 1 | -1.66 | 1.76E-03 |
| BCL2L2 | BCL2 like 2 | -1.54 | 9.91E-05 |
| CDKN1A | cyclin dependent kinase inhibitor 1A | 1.82 | 8.08E-05 |
| DDIT3 | DNA damage inducible transcript 3 | 1.59 | 3.43E-04 |
| GADD45A | growth arrest and DNA damage inducible alpha | 1.98 | 3.71E-05 |
| GADD45B | growth arrest and DNA damage inducible beta | 1.93 | 6.99E-05 |
| MMP1 | matrix metalloproteinase 1 | -2.25 | 9.28E-05 |
| MMP2 | matrix metalloproteinase 2 | -2.20 | 5.82604E-05 |
| MMP3 | matrix metalloproteinase 3 | -2.05 | 3.87E-05 |
| MMP7 | matrix metalloproteinase 7 | -2.09 | 8.84E-04 |
| RAC1 | ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1) | -2.33 | 7.18E-05 |
| YAP1 | Yes associated protein 1 | -1.59 | 2.23E-04 |

Supplementary Table 3: List of qPCR primers

| name | sequences |
|--------------------------|--------------------------------|
| Primers for qPCR: | |
| RDH10 sense: | 5'- TGGGACATCAACACGCAAAGC-3' |
| RDH10 antisense: | 5'- TGCAAGTTACAGTGGGGCAGA-3' |
| TNFRSF12A sense: | 5'- CTCTGAGCCTGACCTTCGTG -3' |
| TNFRSF12A antisense: | 5'- TCTCCGCCGGTCTCCTCTAT -3' |
| TRAF3 sense: | 5'- GCGTGTCAAGAGAGCATCGTT-3' |
| TRAF3 antisense: | 5'- GCAGATGTCCCAGCATTA ACT-3' |
| IKBKB sense | 5'- GAACGGATGATGGCTCTG-3' |
| IKBKB antisense | 5'- CCCTTGCTTGCTCCTCTA-3' |
| TGFBR1 sense | 5'- ACGGCGTTACAGTGTTCCTG -3' |
| TGFBR1 antisense | 5'- GCACATACAAACGGCCTATCTC -3' |
| BMPR2 sense | 5'- ACGGGTATCTTTTGTGGTGT-3' |
| BMPR2 antisense | 5'- TGTCAGCTTTCATAGTGGCATC-3' |
| TRAF1 sense | 5'- CATCTGTCGCTCTTCATCGT -3 |
| TRAF1 antisense | 5'- AAGTGCTGGTCTCCACAATG -3 |
| MAP3K14 sense | 5'- AAAATGGCCCGTGTGTGTG -3 |
| MAP3K14 antisense | 5'- GCCGAGTGGAGACTCATCC -3 |
| NFKBIA sense | 5'- CCTGAAGGCTACCAACTACA -3 |
| NFKBIA antisense | 5'- ATCAGCACCCAAGGACAC -3 |
| NFKBIE sense | 5'- TTACCCATGTTGGGTCAGCC -3 |
| NFKBIE antisense | 5'- AACGGTGTTCAGGGTCCTC -3 |
| TNFAIP3 sense | 5'- CCACGATGCTCAGGTTTG -3 |
| TNFAIP3 antisense | 5'- TCCCTTTCTCAGCCAAGAC -3 |
| GADD45A sense | 5'- GAGAGCAGAAGACCGAAAGG -3 |
| GADD45A antisense | 5'- CAGCAGGCACAACACCAC -3 |
| CDKN1A sense | 5'- TAGGCGGTTGAATGAGAGG -3 |
| CDKN1A antisense | 5'- GTGACAGCGATGGGAAGG -3 |
| GAPDH sense | 5'- TGA CTTCAACAGCGACACCCA -3 |
| GAPDH antisense | 5'- CACCCTGTTGCTGTAGCCAAA -3 |