| Gene   | Forward primer                  | Reverse primer                  |
|--------|--------------------------------|--------------------------------|
| AKT3   | 5′-CTGAGGACCACACAGTTTCTA-3′    | 5′-TGGCCATCTTTGTCCAGCATTA-3′   |
| PIK3CA | 5′-ACTGCAGTCCAACGCACACA-3′     | 5′-AAACAGGTCAATGGCTGATCATA-3′  |
| TGFB1  | 5′-AGCGACTCGCCAGAGTTA-3′       | 5′-GCAGTTGTTATCCCTGTGCTCA-3′   |
| IL1B   | 5′-TCGCCAGTGAAATGAGGTCTTA-3′   | 5′-GTCCATGCGCCAACAACACTGA-3′   |
| IL6    | 5′-AAGCCAGAGCTGTGCAGA TGAGTA-3′ | 5′-TGTCCTGAGCCACT GGCTC-3′   |
| CXCL8  | 5′-GTGCAGAGGGTTGGAAGAAGTTT-3′  | 5′-TCATCGG CATCTTCATCGATTCTTG-3′ |
| CD274  | 5′-CAATGTGACACACAGTGAGAA-3′    | 5′-GGCTGATTGCTCCAAGGTTCA-3′   |
| PDCD1LG2 | 5′-TGGAATTGCAGCTTCCAGCATAG-3′ | 5′-GGCTGTTATTGCTCCAAGGTTCA-3′ |
| GAPDH  | 5′-GCACCGTCAGGCTGAGA-3′        | 5′-ATGTTGGTGAAGACGCGTG-3′     |

Suppl. table 1. Primers used for qRT-PCR
| Antibody | Clone | Dilution | Company          |
|----------|-------|----------|-----------------|
| AKT3     | Polyclonal | 1:250    | Sigma-Aldrich   |
| PIK3CA   | Polyclonal | 1:100    | Sigma-Aldrich   |
| αSMA     | 1A4    | 1:20     | R&D Systems     |
| CD68     | PG-M1  | Ready-to-use | Dako           |
| CD163    | 10D6   | 1:200    | Leica Biosystems|
| CD1a     | O10    | Ready-to-use | Beckman Coulter|
| CD3      | Polyclonal | Ready-to-use | Dako           |
| CD56     | 123.C3.D5 | Ready-to-use | Thermo Fisher Scientific|
| Genes   | AKT1 R-value | AKT1 P-value | AKT2 R-value | AKT2 P-value | AKT3 R-value | AKT3 P-value | PIK3CA R-value | PIK3CA P-value |
|---------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|----------------|
| FCGR1A  | -0.076       | 0.083        | 0.080        | 0.067        | 0.227        | <0.0001      | -0.131         | 0.003          |
| CD68    | 0.083        | 0.060        | 0.071        | 0.107        | 0.125        | 0.004        | 0.060          | 0.173          |
| CD163   | -0.009       | 0.844        | 0.086        | 0.049        | 0.330        | <0.0001      | 0.076          | 0.083          |
| MRC1    | 0.099        | 0.024        | 0.018        | 0.689        | 0.292        | <0.0001      | 0.097          | 0.027          |
| CCL2    | -0.022       | 0.612        | 0.062        | 0.159        | 0.324        | <0.0001      | -0.034         | 0.439          |
| CXCL12  | 0.047        | 0.283        | 0.122        | 0.005        | 0.452        | <0.0001      | 0.148          | 0.001          |
| CSF1    | 0.027        | 0.541        | 0.207        | <0.0001      | 0.421        | <0.0001      | 0.261          | <0.0001        |
| NCAM1   | 0.096        | 0.029        | 0.003        | 0.938        | 0.250        | <0.0001      | 0.017          | 0.706          |
| CD3E    | -0.171       | <0.0001      | 0.152        | 0.001        | 0.159        | <0.0001      | -0.114         | 0.009          |
| CD8A    | -0.203       | <0.0001      | 0.147        | 0.001        | 0.106        | 0.015        | -0.136         | 0.002          |
| CD4     | -0.085       | 0.053        | 0.142        | 0.001        | 0.352        | <0.0001      | 0.027          | 0.534          |
| FOXP3   | -0.063       | 0.149        | 0.191        | <0.0001      | 0.387        | <0.0001      | 0.185          | <0.0001        |
| IL10    | -0.031       | 0.484        | 0.063        | 0.150        | 0.276        | <0.0001      | 0.014          | 0.742          |
| PDCD1   | -0.193       | <0.0001      | 0.130        | 0.003        | 0.107        | 0.014        | -0.171         | <0.0001        |
| HAVCR2  | -0.097       | 0.028        | 0.079        | 0.072        | 0.268        | <0.0001      | -0.081         | 0.065          |
| IFNG    | -0.207       | <0.0001      | 0.099        | 0.025        | -0.030       | 0.498        | -0.205         | <0.0001        |
| GZMB    | -0.191       | <0.0001      | 0.120        | 0.006        | -0.047       | 0.286        | -0.269         | <0.0001        |
| FAP     | 0.243        | <0.0001      | -0.002       | 0.959276     | 0.333        | <0.0001      | 0.078          | 0.074135       |
| COL11A1 | 0.194        | <0.0001      | 0.032        | 0.462758     | 0.41         | <0.0001      | 0.247          | <0.0001        |
| PDGFRB  | 0.218        | <0.0001      | 0.08         | 0.068627     | 0.556        | <0.0001      | 0.267          | <0.0001        |
| POSTN   | 0.184        | <0.0001      | -0.001       | 0.975913     | 0.512        | <0.0001      | 0.225          | <0.0001        |

Abbreviations: HNSCC, head and neck squamous cell carcinoma; TCGA, The Cancer Genome Atlas