**Supplementary Table2. The antibodies of immunohistochemistry in this study**

|  |  |  |
| --- | --- | --- |
| **antibody** | **clone** | **company** |
| β-catenin | E-5 | Santa Cruz |
| Glutamine Synthetase | Glutamine Synthetase-6 | Millipore, Temecula |
| CK19 | RCK108 | Dako |
| SALL4 | 6E3 | Abnova |
| EpCAM | mAb8 | Millipore |
| FOXM1 | Rabbit mAb #2045 | cell signaling technology |
| CD8 | C8/144B | Invitrogen |
| PD-L1 | 28-8 | Abcam |
| PD-1 | NAT105 | Abcam |
| TIM-3 | 1E5 | Invitrogen |
| LAG-3 | EPR4392 | Abcam |

For the evaluation of expression of molecules by immunohistochemistry, the presence of nuclear deposition of β-catenin in greater than or equal to 5% of tumor cells, or diffuse strong staining of GS are considered as positive findings for activation in Wnt/β-catenin signaling. For the expression of PD-L1, we counted the number of PD-L1 positive cells in tumor and tumor infiltered cells for the calculation of the combined positive score (CPS) as reported previously, where CPS was determined as the number of PD-L1-positive cells (tumor cells, lymphocytes, and macrophages) divided by the total number of viable tumor cells × 100.