**Table S1 Immunohistochemical antibodies and protocols**

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| **Antibody** | **Clone** | **Manufacturer** | **Species** | **Catalogue number** | **Antigen retrieval** | **Antibody dilution** | **Incubation time** | **Detection kit** | **Additional steps** |
| Ki67 | MIB-1 | Dako | Mouse mAb | M724029-2 | 30 minute heat in CC1 buffer | 1+100 | 32 min | Ultraview DAB | Ultrawash |
| pAKT  (Ser473) | D9E | New England Bioscience (Cell Signalling) | Rabbit mAb | 4060L | 60 minute heat in CC1 buffer | 1+100 | 60 min | Ultraview DAB | Ultrawash |
| ER | SP1 | Roche | Rabbit mAb | 790-4324 | 30 minute heat in CC1 buffer | RTU | 32 min | Ultraview DAB | Ultrawash |
| PR | 1E2 | Roche | Rabbit mAb | 790-2223 | 30 minute heat in CC1 buffer | RTU | 30 min | Ultraview DAB | Ultrawash |
| PTEN | 6H2.1 | Dako | Mouse mAb | M362729-2 | \*Pressure Cooker | 1+10 | 32 min | Optiview DAB | None |

\*Pressure Cooker: Menarini Antigen Access Unit; Pressure: 17 PSI; Heat: 122.50c, Menarini buffer; Access Super RTU. Time: 1 min at full temperature. Full cycle approx 40 minutes.