

| Antibody                | Raised in | Fix      | Antigen retrieval                             | Dilution                | Manufacturer                       |
|-------------------------|-----------|----------|---|-------------------------|------------------------------------|
| β1-integrin             | Rat       | Carnoy's | none  | 1:500                   | Chemicon                           |
| c-Myc (Ab-3)            | Mouse     | 4% PFA   | PC  | 1:10                    | Calbiochem                         |
| CyclinD1<br>(Clone SP4) | Rabbit    | Formalin | 2 min<br>PC in 10<br>mM<br>EDTA<br>pH8.0      | 1:50                    | Labvision                          |
| E-cadherin              | Mouse     | Carnoy's | none  | 1:500                   | BD<br>Transduction<br>Laboratories |
| EGFR                    | Sheep     | Frozen   | none  | 1:25                    | Upstate                            |
| ErbB2 (C-18)            | Rabbit    | Frozen   | none  | 1:100                   | Santa Cruz                         |
| ErbB3 (C-17)            | Rabbit    | Carnoy's | none  | 1:50                    | Santa Cruz                         |
| ErbB4 (C-18)            | Rabbit    | 4% PFA   | MW  | 1:300                   | Santa Cruz                         |
| Filaggrin               | Rabbit    | Carnoy's | none  | 1:6000                  | Covance                            |
| Involucrin              | Rabbit    | Carnoy's | none  | 1:7500                  | Covance                            |
| K1                      | Rabbit    | 4% PFA   | none  | 1:12000                 | Covance                            |
| K5                      | Rabbit    | 4% PFA   | none  | 1:7000                  | Covance                            |
| K10                     | Rabbit    | Carnoy's | none  | 1:2500                  | Covance                            |
| K14                     | Rabbit    | 4% PFA   | MW  | 1:3000                  | Covance                            |
| K15                     | Mouse     | Carnoy's | none  | 1:350                   | Labvision                          |
| K2e                     | Mouse     | PFA      | MW  | 1:100                   | Abcam                              |
| Ki67 (Clone Tec3)       | Rat       | Formalin | 18 mins<br>MW in<br>Dako<br>solution<br>pH6.0 | 1:125                   | Dako                               |
| Nrg3                    | Rabbit    | Formalin | MW  | 1:50                    | Abgent                             |
| p63                     | Mouse     | Formalin | PC  | 1:200<br>1hour at<br>RT | Santa Cruz                         |
| Tenascin-C              | Rabbit    | Formalin | none  | 1:20                    | IBL Co., Ltd                       |

#### **Additional File 6. Immunohistochemistry methods.**

MW – 18 minutes in microwave in citrate buffer pH 6.0, PC – pressure cooking for 2 minutes in citrate buffer pH 6.0. All antibodies used for immunohistochemistry were incubated overnight at room temperature unless otherwise stated.