Supporting information

S1 Table. Immunohistochemistry antibodies and staining protocols

| Antibody   | Company              | Clonality | Clone | HIER       | Dilution | Incubation | Second. Antibody | Company | Dilution | Incubation | Detection         | Company | Incubation | DAB | Hematoxylin |
|------------|----------------------|-----------|-------|------------|----------|------------|------------------|---------|----------|------------|-------------------|---------|-------------|-----|-------------|
| Ubiquitin  | Agilent Technologies | Rb. poly. |       | pH 9.0; 20 min. WB 98°C | /1000    | 30min. RT  | -                | -       | -        | -          | Zytomed polymer HRP | Zytomed | Kit         | 2x5min. | 5min.       |
| p62        | Santa Cruz           | Ms. mono. | D-3   | pH 9.0; 20 min. WB 98°C | /1000    | 30min. RT  | -                | -       | -        | -          | Zytomed polymer HRP | Zytomed | Kit         | 2x5min. | 5min.       |
| LC3B       | Nano Tools           | Ms. mono. | 5F10  | pH 9.0; 20 min. WB 98°C | /3000    | 30min. RT  | -                | -       | -        | -          | Zytomed polymer HRP | Zytomed | Kit         | 2x5min. | 5min.       |
| Cathepsin B| Santa Cruz           | Rb. poly. |       | pH 9.0; 20 min. WB 98°C | /500     | 30min. RT  | -                | -       | -        | -          | Zytomed polymer HRP | Zytomed | Kit         | 2x5min. | 5min.       |
| Cathepsin D| Santa Cruz           | Gt. poly. |       | pH 9.0; 20 min. WB 98°C | /6000    | 60min. RT  | Rb Anti Gt Chemicon AP106 /1000 30min.RT | -       | -        | -          | Zytomed polymer HRP | Zytomed | Kit         | 2x5min. | 5min.       |
| Lamin AC   | Cell Signaling       | Rb. poly  |       | pH 9.0; 20 min. WB 98°C | /25      | 60min. RT  | -                | -       | -        | -          | Cell Signaling boost Rb polymer HRP | Cell Signaling | Kit | 2x5min Permante red | 5min. |
| BRAFV600E  | abcam                | Ms. mono. | VE1   | pH 9.0; 20 min. WB 98°C | /400     | 30min. RT  | -                | -       | -        | -          | Zytomed polymer AP | Zytomed | Kit         | 2x10min. | 5min.       |

Antibodies and staining protocols are shown in detail. From each FFPE tissue 3-to-5 µm-thick sections were cut, dewaxed and pre-treated for further processing in an automated staining device (Dako Autostainer, Dako Glostrup Denmark). Abbreviations: Rb: rabbit; Ms: mouse; Gt: goat; poly: polyclonal; mono: monoclonal; WB: water bath; HIER: heat-induced epitope retrieval.