**Supplementary File 4**

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| **Antibodies** | **Vendor** | **Cat No.** | **Dilution** |
| Histone H3 tri methyl K27 (H3K27me3)  | Cell signaling | 9733s | 1:1000 |
| DP1 | Abcam | ab124678 | 1:1000 |
| EZH1 | Abcam | ab189833 | 1:1000 |
| EZH2  | Cell Signaling | 5246s | 1:2000 |
| KDM6A | Abcam | ab36938 | 1:1000 |
| KDM6B (C-term) | Abcepta | AP1022b | 1:1000 |
| KDM6B (N-term) | Abcepta | AP1022a | 1:1000 |
| P53 | Santa Cruz | sc-126 | 1:1000 |
| Histone H3 | Cell signaling | 4499s | 1:1000 |
| Beta Actin | Abcam | ab20272 | 1:2000 |
| Rabbit IgG HRP-conjugated antibody | R&D System | HAF008 | 1:2000 |
| Mouse IgG HRP-conjugated antibody | R&D System | HAF007 | 1:2000 |
|  HRP, Mouse Anti-Rabbit IgG LCS  | IPKine™ | A25022 | 1:2000 |