**Supplementary File 5**

**Correletion coefficients of DNMT3b occupancy and 5meC levels predictions**

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| --- | --- | --- |
| PREDICTOR(S) | PREDICTED: 5meCPG LEVELS | PREDICTED: DNMT3B OCCUPANCY |
| **CORRELATION** | **ADJ R2** | **CORRELATION** | **ADJ R2** |
| H3K4me3 | 0.675381 | 0.4453 | 0.4309058 | 0.1637 |
| H3K36me3 | 0.3837221 | 0.1474 | 0.6271073 | 0.3927 |
| DNMT3b/5meC | 0.7000648 | 0.4627 | 0.7000648 | 0.4627 |
| nucleosome | 0.0715297 | 0.003606 | 0.147471 | 0.02157 |
| RNApolII | 0.004768579 | -3.43E-05 | 0.3148327 | 0.1119 |
| H3K4me3 | **H3K36me3** | 0.7868484 | 0.6114 | 0.7713618 | 0.5749 |
| DNMT3b/5meC | **H3K36me3** | 0.7034986 | 0.4657 | 0.8002787 | 0.6194 |
| H3K4me3 | **H3K36me3** | **nucleosome** | 0.786882 | 0.6114 | 0.7783655 | 0.5832 |
| H3K4me3 | **H3K36me3** | **RNApolII** | 0.7873445 | 0.6134 | 0.7760999 | 0.583 |
| H3K4me3 | **H3K36me3** | **DNMT3b/5meC** | 0.8215763 | 0.6635 | 0.8090604 | 0.632 |
| all | 0.8247778 | 0.6706 | 0.8221772 | 0.6533 |